

ELICITING DISCRETE POSITIVE EMOTIONS WITH VIGNETTES AND FILMS:
A VALIDATION STUDY

By

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CHAPTER I

INTRODUCTION

All typically-developed individuals experience a myriad of emotions throughout each day and unquestionably across a lifespan. We have all encountered experiences that have left us feeling amused, disappointed, determined or overwhelmed. We do not feel every emotion during all experiences because an individual's particular emotions are dependent on the mental appraisal of a situation in relation to his or her well-being. When an event occurs, an individual appraises the situation by perceiving the occurrence as positive or negative, causing the induction of emotion(s) and the promotion of actions and reactions (Roseman & Smith, 2001). While one experience may be viewed in a positive light, resulting in positive affect, a negatively viewed situation may result in less pleasant emotions. Imagine two students are in a classroom awaiting the return of a previously completed important and challenging exam. Prior to the test, both students spent ample time studying, completing homework and attending review sessions. When presented with their results, one student receives an A while the other student receives a lesser, unimpressive grade. The first student is likely to appraise the situation positively and view him or herself as capable, resulting in positive emotions such as relief, pride or satisfaction. On the other hand, the second student may negatively appraise the situation and perhaps adversely view him or herself as well as the teacher who administered the exam. These appraisals are likely to result in a negative emotion such as embarrassment,

disappointment, anger or irritation. These two students display how different situations can result in the elicitation of emotions of varying valence.

Emotions have a profound impact on individual lives as they serve to shape the human experience. The majority of psychologists would define an emotion as an intricate personal experience that is accounted for by appraisal, facial expressions, physiological responses, feeling states, action tendencies and coping strategies (Smith & Lazarus, 1990). Emotions are largely influential because they involve the aforementioned appraisal of external objects as significant to our own well-being. Said judgments cause emotional responses to occur as individuals become aware of what experiences are painful and which ones are pleasurable (Snyder, et al., 2011).

The emotions that result as a product of situational appraisals serve as an internal guidance system and most likely arose to help individuals recognize threat and identify whether or not a particular need is being met (Keltner & Gross, 1999). Emotions also aid in the decision making process. Frequently, people allow their emotions to determine and support their choices. This reliance on emotions when making decisions is clearly seen in more serious cases where damage to brain regions associated with emotions can limit an individual's ability to make choices. Research indicates that patients that suffer trauma to certain portions of the neural system associated with emotional processing (i.e., orbitofrontal cortex) show difficulty making even the simplest of decisions (Bechara, Damasio & Damasio, 2000). Emotions also serve to communicate vital information to the individual about their surroundings. For example, while experiencing joy conveys to us that we are doing well and that we are safe to explore the current environment, fear indicates a dangerous environment and provides motivation to escape (Fredrickson, 1998;

Fridja, 1987). Emotions also function as a means of communicating with others as corresponding facial expressions may serve as emotional indications (Ekman, 1992).

Because emotions are vital to our everyday lives, it is important that they be studied within a laboratory setting. Such research seeks to construct a complete understanding of emotions in general as well as the fundamental functions they serve. Current research largely highlights the antecedents and consequences of negative emotions; however, the field of psychology has started to make a significant shift toward a focus on positive emotions.

Positive Emotions

Historically, positive emotions have received limited scholarly attention as few researchers hypothesized that the rewards of emotions such as amusement or gratitude surpassed pleasure-based values. While the majority of previous studies have focused on the causes and costs of negative emotions, recent research has placed an emphasis on positive emotions. Positive emotions are now being associated with psychological, social, intellectual and physical resources (Fredrickson, 2001). Isen and colleagues (1987) have linked mild positive emotions to increased helping behaviors, flexible thinking and improved problem solving abilities. More recently, such benefits have been linked to discrete positive emotions. For example, an experiment conducted by DeSteno, Dickens and Lerner (2014) uncovered that gratitude elicitation may result in increased economic patience as related to the acceptance of delayed, rather than immediate financial rewards. Gratitude has also been shown to increase an individual's overall level

of happiness and life satisfaction while lowering rates of depression and reports of physical health symptoms (e.g., stomach pain) (Kimmerling, 2014).

Physical Health

While psychological distress (linked with negative emotions) has been shown to adversely affect the endocrine and central nervous systems, as well as immune responses, positive emotions are associated with the promotion of physical health (Fredrickson, Maynard, et al., 2000; Khansari, Murgu & Faith, 1990; Evans, Bullinger, & Hygge, 1998). On average, individuals who regularly report positive moods maintain stronger immune system defenses (Khansari, Murgu & Faith, 1990). Additionally, following a stressful life experience, individuals who are capable of regaining and maintaining a positive emotional state are less likely to fall ill or call upon medical services (Catanzaro & Greenwood, 1994). For example, individuals who exhibit optimism after experiencing a traumatic injury have largely been shown to recover at a faster rate (Carver & Scheier, 1998). Ultimately, positive emotions serve as one of the best buffers against disease acquisition, disease advancement and death (Taylor, Kemeny, Reed, Bower, & Gruenewald, 2000).

Mental Health

The physical health benefits of positive emotions are supplemented by their psychological advantages. The experience and maintenance of positive emotions (e.g., problem-focused coping, positive reappraisal) can serve as a buffer against psychological stressful stimuli and may reduce susceptibility to depressed moods (Folkman & Moskowitz, 2000; Schaefer & Moos, 1992). More specifically, positive emotions have been shown to help individuals cope with hardship. Positive emotions serve as a coping

mechanism as they correct or undo unwelcome effects of negative emotions (Fredrickson, 2001). This effect is particularly salient during times of crisis. Research indicates that the experience of positive emotions following a catastrophe (e.g., the terrorist attacks on September 11, 2001) serves as a buffer against depression and partially accounts for individual resilience (Sandel, 2008). Ultimately, appropriate positive emotional responses to stressful situations are essential for coping with trauma as well as aversive daily life events (Reynaud, et al., 2013).

In addition to fostering basic mental health, positive emotions promote high-quality relationships as well as a mindset that makes an individual better equipped to handle life's unexpected occurrences. Positively valenced emotions such as gratitude have been shown to foster relational growth and the cultivation of social bonds (Algoe, Fredrickson & Shelly, 2013). Furthermore, positive emotions have been shown to broaden an individual's attentional scope. Unlike negative emotions, which narrow an individual's focus, positive emotions broaden one's temporary thought-repertoires. This expansion allows individuals to be more receptive to new people and ideas. Increased attentional focus is also imperative to individuals who are faced with challenging tasks, threats and adversity (Fredrickson, 2001).

Positive discrete emotions affect an individual at specific moments and the aggregation of said discrete emotions account for an individual's overall mental and physical well-being. Research indicates that positive emotions have the opposite effects of harmful negative emotions and that on a holistic level, positive emotions are beneficial as predictors of coping ability and general health. Evidence points to the relationship between proper emotion regulation, positive affect and affect intensity with a beneficial

influence on the well-being of an individual (Pandey & Choubey, 2010). As a result of this relationship between positive emotions and advantageous physical and mental consequences, the ability to readily elicit positive emotions may allow individuals to gain great benefits.

Current Studies

Although beneficial and important, the individual variability, reduced differentiation and transient nature of positive emotions make them inherently difficult to study (Ellsworth & Smith, 1988). This difficulty partially accounts for the historical use of a medical model that focuses on “imbalances” (including negative emotions) and how to correct them. However, differentiation and understanding of positive emotions *is* possible and the ability to successfully elicit discrete positive emotions is essential to psychological research.

Previous researchers have sought to elicit positive emotions via recollection tasks during which participants are asked to recall and re-immense themselves in past pleasant experiences. Using this method, Ellsworth and Smith (1988) found considerable differentiation among six positively valenced emotions (1) interest (2) hope/confidence (3) challenge (4) tranquility (5) playfulness and (6) love. Other previously studied elicitation methods include emotional pictures, behavior, vignettes, tasks (e.g., didactic interaction tasks), music and scripts (Rottenberg, Ray, & Gross, 2007). Unfortunately, elicitation procedures are often limited due to restrictive parameters that may prevent participants from authentically experiencing the target emotion(s) (e.g., lab setting, time constraints, ethical concerns). Furthermore, prior mood inductions used in labs studies

have not been appropriately differentiating (i.e., target general positivity rather than a particular discrete emotion such as pride, gratitude, etc.) and most experiments have resulted in only mild mood changes.

Our research focuses on vignettes (short, evocative descriptions) and film clips as elicitation methods for discrete positive emotions. Films are recognized as useful methods of emotion elicitation largely because they can be examined on the seven dimensions put forth by Rottenberg, Ray, and Gross (2007): intensity of emotional response, complexity of the stimuli, demand characteristics, standardization, temporal resolution, ecological validity and attentional capture. These characteristics may also be applied to vignettes. Vignettes have been shown to successfully serve as forms of guided imagery to get at target moods and emotions (Mayer, Allen, & Beauregard, 1995). Films and vignettes are effective because they both allow for high levels of emotional response and can be characterized by high levels of complexity and minimal demand characteristics (cues that indicate a bias). These methods of elicitation can be standardized and display high ecological validity (replication) and attentional capture.

Although researchers have attempted to construct elicitation databases, most projects have been geared toward the use of negatively valenced methods to elicit negative emotions. Targeting of positive emotion is difficult because of issues related to distinction and strength. Prior mood induction methods such as the International Affective Picture System (IPAS) slides only target general positivity and negative affect and many studies have not been appropriately differentiating as they only produce mild shifts in emotion. We are looking for an effect more similar to real-life positive

experiences that aren't quite so fleeting. Our research aims at creating a database of positively valenced films and vignettes that is cohesive, accessible and validated.

The current study focuses on twenty positive affective states: (1) amused (2) awed/amazed (3) calm/tranquil (4) compassionate (5) curious (6) determined/motivated (7) eager/enthusiastic (8) family love/caring/devotion (9) grateful/appreciative (10) hopeful/optimistic (11) inspired (12) interested/engaged (13) joyful/happy (14) lust/attraction (15) proud/triumphant (16) relieved/unburdened (17) romantic love (18) satisfied (19) schadenfreude¹ (20) surprised/astonished. In studying the elicitation of emotions, it is important for us to be as expansive as possible in relation to the number of emotions we examine. Our hope is that this wider array of discrete positive emotions will allow for elicitation techniques that can be used on a broader scale. These emotions are considered discrete because as we seek to individually elicit each emotion, we focus solely on the target emotion and aim to evoke only relatively low levels of all other emotions. Due to the reduced differentiation and number of positive emotions as compared to negative emotions, positive emotions are frequently experienced as a “blended” state of multiple emotions (Fredrickson, 1998; Ellsworth & Smith, 1998). Because of this overlap, certain levels of other positive emotions are expected when eliciting a target emotion.

Preliminary Studies

The goal of the current investigation was to juxtapose the emphasis on negative emotions by examining means of inducing specific positively valenced emotions.

¹ Schadenfreude is a German word used to describe the emotion experienced when one takes pleasure in someone else's misfortune.

Building off of my undergraduate honors work completed at Vanderbilt University, our research aimed to produce a validated database of elicitation methods that can be utilized as an accepted means of specific positive emotional induction. The ideal database would be comprised of select previously constructed vignettes and collected film clips that have been shown to successfully elicit 18-20 discrete positive emotions. Validation of said methods may help fill the void in current psychological research where there is a heavy focus on negative emotions and the action-tendencies they produce and a lesser concentration on positive emotions.

The following study was an extension of a two-part developmental study focused on the elicitation of 20 discrete positive emotions by presenting two methods for elicitation (1) vignettes and (2) films. Study 1 utilized 60 vignettes—three vignettes for each of the 20 positive emotions. These vignettes were no longer than 235 words and were created using survey data. The survey was distributed to friends and family members of the Discrete Emotion and Appraisal Laboratory and was designed to acquire ideas for vignettes, as we wanted to make them contemporary and relevant to maximize their induction potential. Participants were asked to recall three past experiences during which they felt the target emotion (i.e., compassion). They were then asked to select one of these experiences to re-immense themselves in. Participants described the experience in as much detail as possible including the setting, who they were with, what they did and what they wanted to do. Ideas for vignettes were also acquired through face-to-face interviews conducted with 25 (60% female) individuals around Vanderbilt campus as well as the greater Nashville area. The survey and interview results were analyzed to identify common themes across individuals' experiences of the 20 target emotions to be

used in the novel induction vignettes. In Study 1, 76 undergraduate participants were presented with the 60 vignettes. After reading a complete set of (3) vignettes for an indicated discrete positive emotion, participants were instructed to rank the vignettes in relation to how successfully they elicited the target emotion. The aggregate rankings resulted in the procurement of a single best vignette for each of the 20 emotions.

Study 2 utilized 121 films—five to nine clips for each of the 18 positive emotions. These films were limited to a five-minute maximum length because shorter scenes are more likely to elicit a single emotion and retain the participant’s attention (Kolodyazhniv et al., 2011). In addition to utilizing suggestions posited by lab members, film, television and commercial moments were recommended by participants who completed a survey. Similar to Study 1, this survey was distributed to friends and family members of our lab. Participants were asked to recall film moments that caused them to experience the target emotion. For example, participants were asked, “What film or television moment(s) made you feel relieved/unburdened?” An ideal response would include a film, television or commercial title and a description of the specific moment. Survey responses were combined with suggestions posited during lab meetings and said list was narrowed down to the strongest five to nine clips per discrete emotions. To be included in the condensed list, a film moment had to clearly display the target emotion and have the ability to stand alone (i.e., a viewer did not have to have seen the film or television show not did they need outside information such as the plot). Ultimately, the clips were isolated using the download and editing software MacTubes, HandBrake and MPEG. In Study 2, 38 undergraduate participants were randomly assigned to one of two groups and granted

online access to the video clips for one of two sets of nine emotions². Participants completed a corresponding electronic survey to rank the videos in order of intensity of induction of the target emotion. The mean rankings indicated which film clips most successfully elicited each of the 18 discrete positive emotions.

Our current research was completed in two parts, each of which was aimed at determining the most salient means of eliciting 18-20 discrete positive emotions. Study 1 of the current study utilized the aforementioned 20 sets of vignettes. Study 2 of the current study utilized the 18 sets of emotional film clips. After obtaining the initial rankings through my undergraduate research we evaluated the overall success of each method using Euclidean distances to determine which empirical profiles were most similar to an idealized profile (high rating for target emotion, low rating for other emotions). These analyses allowed us to go beyond the highest elicitation of the target emotion to isolate vignettes and film clips that were also low on other emotions; so, more discrete in relation to elicitation.

² Eager and satisfied were excluded from the film method of elicitation, as it was too difficult to find at least five video clips that seemed to target these discrete positive emotions.

CHAPTER II

STUDY ONE

Method

Participants & Design

253 undergraduate students from Vanderbilt University participated in Study 1. Participants did not report gender, ethnicity, or age; however, undergraduates typically range from 17 to 23 years of age³. The Institutional Review Board at Vanderbilt approved all measures and procedures. All participants were volunteers who received course credit in an undergraduate psychology course in exchange for their participation. Participants were assigned to an experimental group based on their month of birth. Table 1 describes the randomized assignment of participants to vignettes for a set of two, undisclosed target emotions.

Group/Birth Month	# of Participants	Target Emotions
(1) March	19	Awed, Compassionate
(2) June/October	18	Content, Schadenfreude
(3) April	25	Calm, Determined
(4) December	46	Inspired, Surprised
(5) September	17	Eager, Romantic Love
(6) July	24	Amused, Family Love
(7) August	24	Grateful, Relieved
(8) May	13	Lust, Pride
(9) February/November	22	Interested, Curious
(10) January	34	Hopeful, Joyful

Table 1: List of Survey Assignment by Participant Birth Month for Study 1

³ Failure to collect data on gender was a result of an error in the survey creation. Every survey utilized in Study 1 should have included an initial identifying question to establish the participant's gender for later ANOVA analysis.

Measures

Discrete Emotion Adjective List (DEAL). Throughout the study, levels of induced emotions were assessed using the Discrete Emotion Adjective List (DEAL; Smith and Kirby, 2010). The DEAL measures discrete negative and positive emotions by presenting participants with clusters of one to three adjectives associated with a particular emotion. Participants were asked to generate a single rating for each group. A full copy of the instrument can be found in the Appendix. Participants used a 9-point Likert scale ranging from 1 (does not characterize my feelings at all) to 9 (characterizes my feelings extremely well) to rate how strongly they were experiencing the listed adjectives after reading each vignette.

Apparatus

Surveys and data for Study 1 were managed using RedCap electronic data capture tools hosted at Vanderbilt University (Harris et al., 2009). RedCap (Research Electronic Data Capture) is a secure, web-based application designed to support data capture for research studies, providing: 1) an intuitive interface for validated data entry; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for importing data from external sources.

Emotion induction

As previously stated, participants were assigned to one of 10 possible surveys based on their indicated month of birth. Each survey included two sets of three vignettes. Each set of vignettes targeted two, undisclosed positive emotions. The complete set of

vignettes as well as a visual of the RedCap survey and instructions can be found in the Appendix.

Our ultimate goal was to select the most effective materials to be used in subsequent emotion induction studies. The aim of Study 1 was not to specifically induce an emotion but rather; emotional data was collected to determine which emotional profiles were produced following exposure to each vignette. This information should help us target elicitation methods that prompt high levels of the target emotion in comparison to all other emotions so they may be utilized in future experiments (i.e., buffering studies).

Procedure

Participants registered for the survey session for Study 1 via SONA and received undergraduate course credit in exchange for their participation. Students in Study 1 were granted access to link leading to a survey administered through RedCap online survey software. This preliminary link asked each participant to use a dropdown menu to indicate his or her month of birth. The response provided redirected participants to one of 10 possible surveys, each with 6 vignettes.

Participants were instructed to read each vignette (no longer than 235 words) and immerse themselves in the depicted situation. Following each vignette, participants were asked to reflect on their emotional state and use the DEAL to indicate the extent to which 36 clusters of positively and negatively valenced adjectives characterized the feelings and emotions they experienced when reading the previous vignette.

Completion of a survey was expected to take less than one hour and subjects were able to complete the survey online on their own.

Analysis

A total of 253 responses were recorded for the 20 discrete positive emotions and their corresponding vignettes. Nineteen participants gave ratings for awed and compassionate, 18 for content and schadenfreude, 25 for calm and determine, 46 for inspired and surprised, 17 for eager and romantic love, 24 for amused and family love, 24 for grateful and relieved, 13 for lust and pride, 22 for interested and curious and 34 for hopeful and joyful. Average DEAL ratings for each emotion were calculated for all 60 vignettes. Preliminary data organization highlighted elevated average DEAL ratings for both positive and negative emotions. The computed rating averages were used to construct marked line graphs to examine emotional trends for the 60 vignettes. This graphic allowed us to quickly visualize average emotional levels and similarity to an idealized profile. This ideal profile would involve high levels of the target emotion (rating of 9) and low levels of all other emotions (rating of 1).

The ultimate success of an elicitation method was determined via Euclidian distance calculations that compared the empirical profile with the idealized profile for all emotions for each vignette. The empirical profile represents the mean DEAL ranking for each emotion. An example of the ideal profile can be found below in Figure 1.

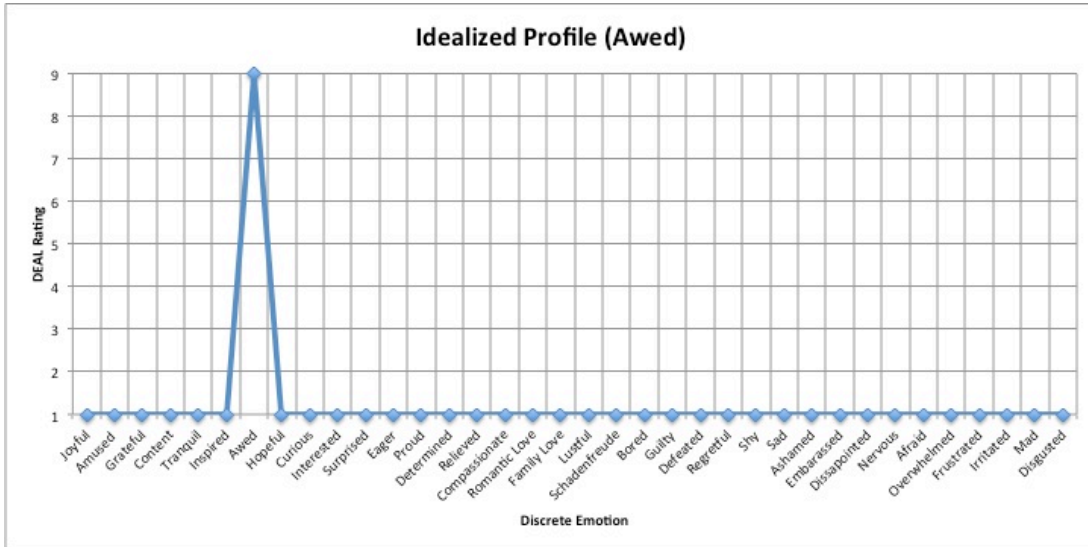


Figure 1: Example of Ideal Profile (Awed)

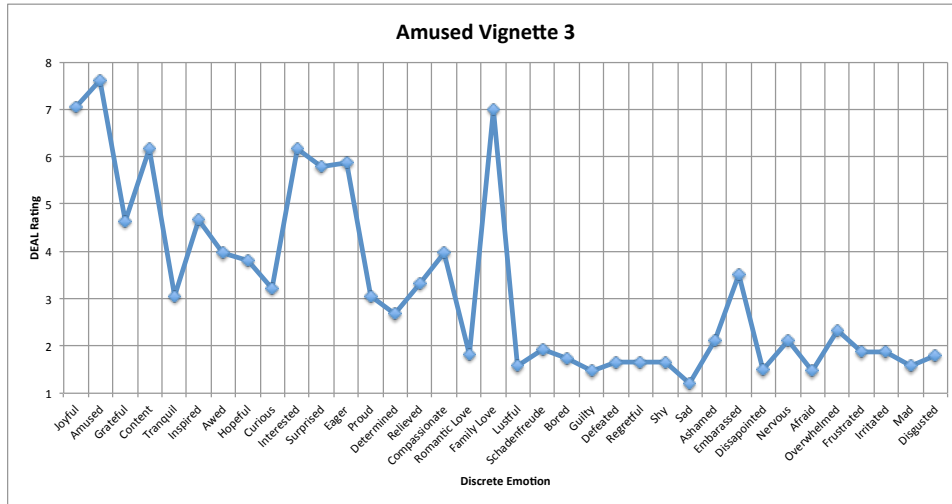
The empirical profile value was subtracted from the idealized profile value and the resulting number was squared to produce the squared Euclidean distance. All 36 squared distances were summed for each of the three vignettes per emotion. The smaller the resulting value, the more similar the empirical and idealized profiles are to one another.

Results

All calculated sums of squares for each of the 60 are located in the Appendix. The lowest sum of squares value is bolded and is representative of the vignette that produced an empirical profile most similar to the idealized profile (rating of 9 for target emotion, rating of 1 for all other emotions). The corresponding most successful vignette and a marked line graph illustrating the emotional profile of said vignette can be found in Figure 2. The minimum possible value for the sums of squares was 0 and the maximum possible value was 2240 (rating of 9 for all emotions).

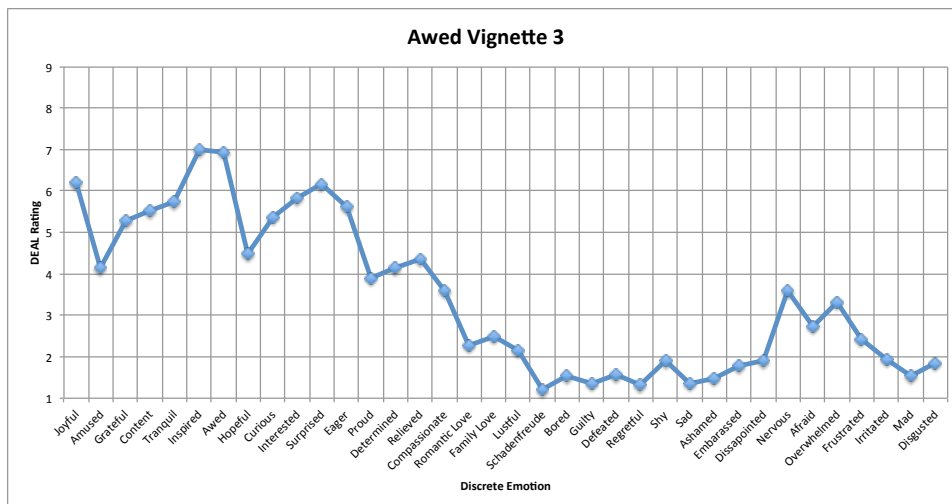
AMUSED Vignette 3 (265.34)

You are at the dinner table with your family. You father is a notoriously funny man who never misses an opportunity to tell a joke. Tonight is no different. You father calls everyone's attention to him as he begins to speak. His joke is entertaining at first. You and your siblings exchange glances and smiles. Finally, he gets to the punch line. During his delivery you are sipping on water. His phrasing is so hilarious that your drink comes streaming out of your nose and mouth. Your whole family and you burst out into laughter over this funny joke and your even more comical reaction.



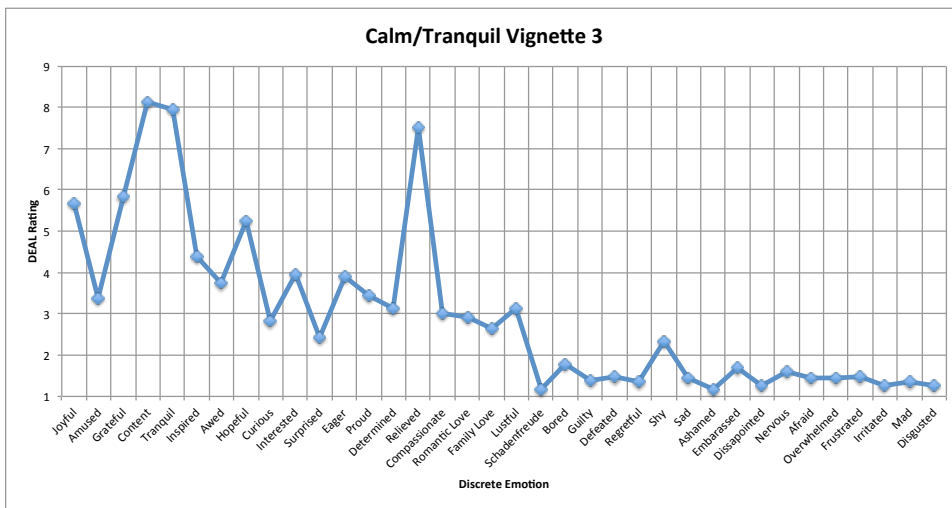
AWED Vignette 3 (304.76)

On a trip to Australia you decide to visit The Great Barrier Reef. It is a cloudless, warm and sunny afternoon. A tour guide takes your friends and you out on a boat. When you are far enough out in the Pacific ocean, your tour guide equips you with snorkeling gear and a wetsuit. As the boat comes to a halt, you all drop into the warm ocean. The water is crystal clear. You look down to find vibrant coral and tropical fish. You are taken back by this oceanic wilderness. You turn as a sea turtle brushes your side. You are speechless. It is clear to you why The Great Barrier Reef has been named one of the seven natural wonders of the world.



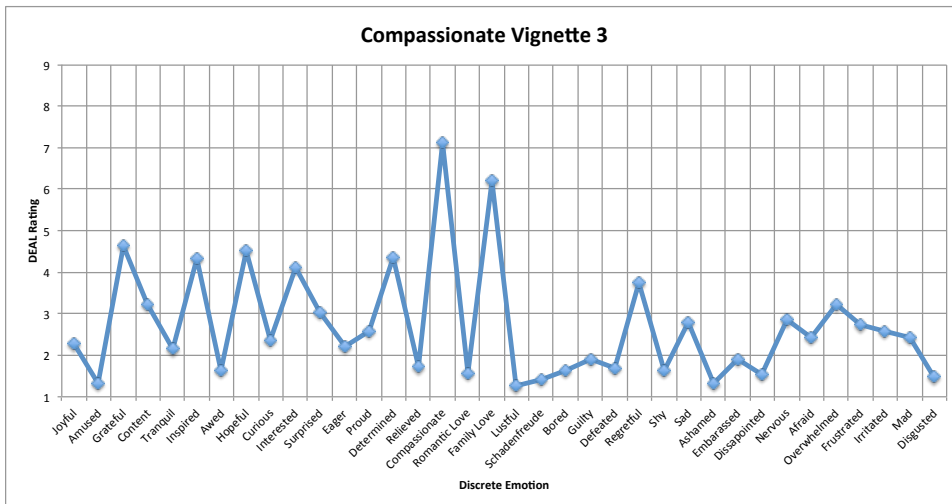
CALM/TRANQUIL Vignette 3(235.56)

You have had a great week at work. You closed a very important deal and to treat yourself, you decide to make an appointment for a massage. Upon arriving at the spa you are placed in a private room to await your masseuse. The lights are dim and you take in the smell of scented candles as your ears are filled with the light sound of a running brook. You lay stomach-down on the massage table. You feel warm and comfortable under a soft but light blanket that covers your entire body. The masseuse enters the room and their demeanor soothes you. You are asked to take 3 long, deep breaths. The masseuse applies warm oil to your back and places one hand on top of the other before circling around and applying pressure to each shoulder blade. Next, the masseuse spreads their hands with a thumb on either side of the spine. Starting at the base, they run to the top and gently back down with increasing pressure. As the massage continues your muscles release all tension and your breath slows.



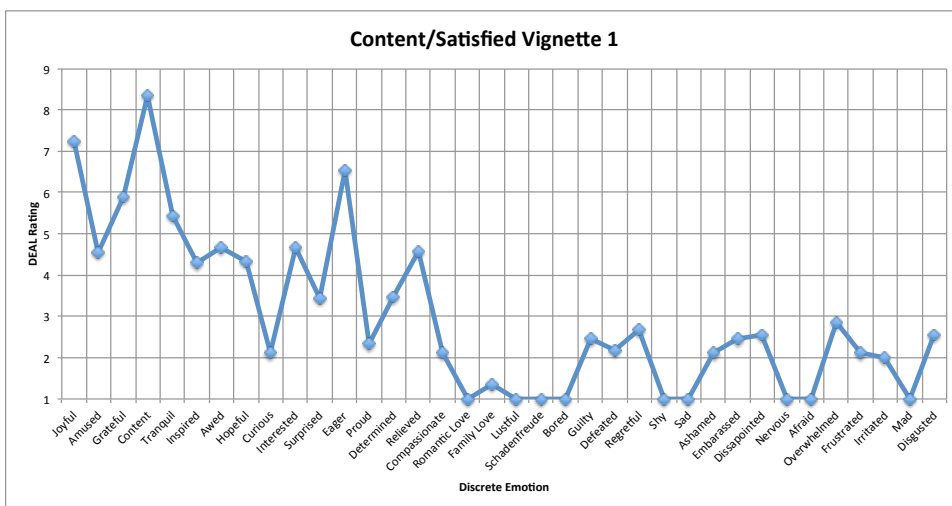
COMPASSIONATE Vignette 3 (139.83)

Recently your neighbor experienced severe financial woes as a result of the failing economy. You have a feeling of deep sympathy for your neighbor because he has a wife and children who are depending on him to provide. Stricken by misfortune, the family is facing possible eviction if they cannot increase their household income. Your strong desire to alleviate their suffering pushes you to offer help. Although your own resources are limited, you are willing to watch their children for free so that they can spend their time searching for jobs.



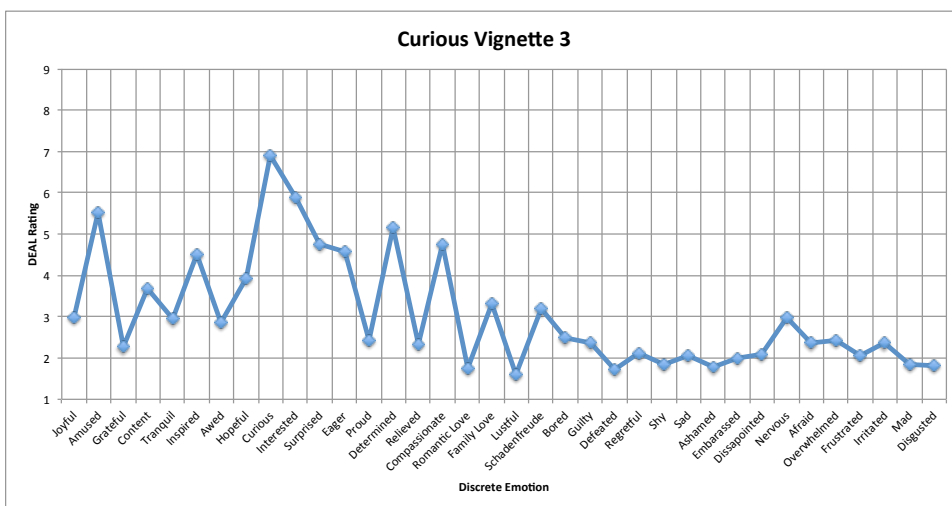
CONTENT/SATISFIED Vignette 1 (224.34)

This year, your immediate family is hosting Thanksgiving. The day before, everyone pitches in to help prep and cook for the upcoming meal. When Thanksgiving day arrives, you sit down to a vast variety of food. You pile your plate high with buttery mashed potatoes and creamy gravy, fresh vegetables and homemade biscuits. The turkey sits as the centerpiece, its brown, crispy skin simmering under the dining room lights. You devour warm slices of turkey topped with cranberry sauce. After dinner you help yourself to a steaming slice of apple pie topped with a decadent scoop of creamy vanilla ice cream. As the meal comes to a close, you are full but not too stuffed. You make your way to the couch where you revel in the delicious meal you just consumed.



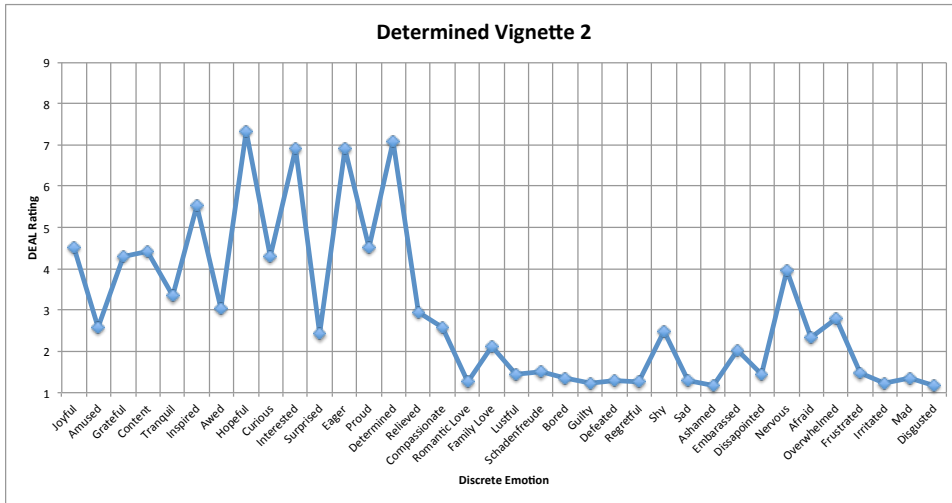
CURIOUS Vignette 3 (185.67)

You receive a phone call from your friend. He sounds confused and as the conversation continues you realize that he is unsure of what he did last night. After a night out, your friend is unable to recall where he went or what he did. He is not nervous or upset but he is seeking your help. He wants you to try to piece together his night. You are entertained by the thought of solving this mystery. You wonder what he could have done, where he could have been and whom he could have met. You are inquisitive as you ask him plenty of questions in an attempt to piece together this puzzle.



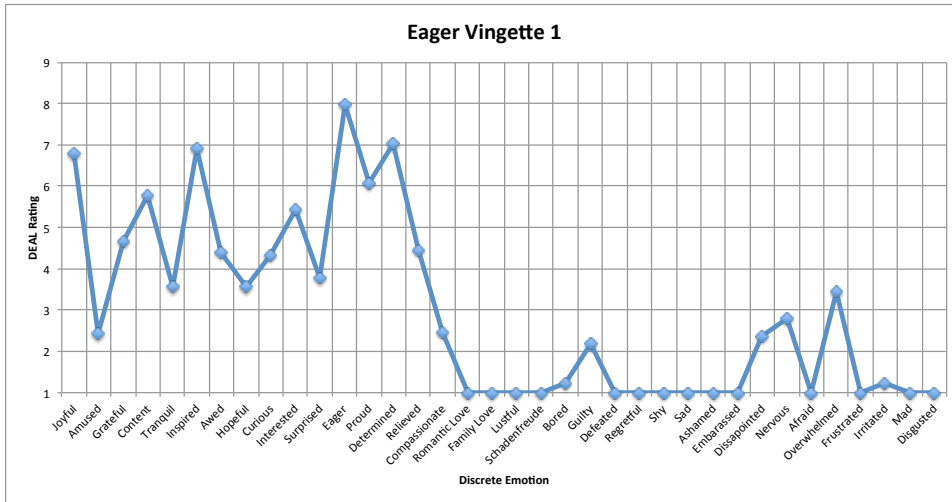
DETERMINED Vignette 2 (232.76)

You have spent the past few months applying for jobs. There is a particular position that seems perfect for you. Luckily, you are asked to come in for a formal interview. You gladly accept the opportunity. You purchase a flattering interview outfit that makes you look both attractive and professional. You are sure to read up on the company. You also prepare a list of talking points so that you will appear knowledgeable and intelligent. On the day of the interview, you arrive at the business. You feel positive and assured that you have prepared appropriately for this big day. You recognize that this will be a challenging interview but you are not nervous. You are sure that you are capable of succeeding and attaining a job offer.



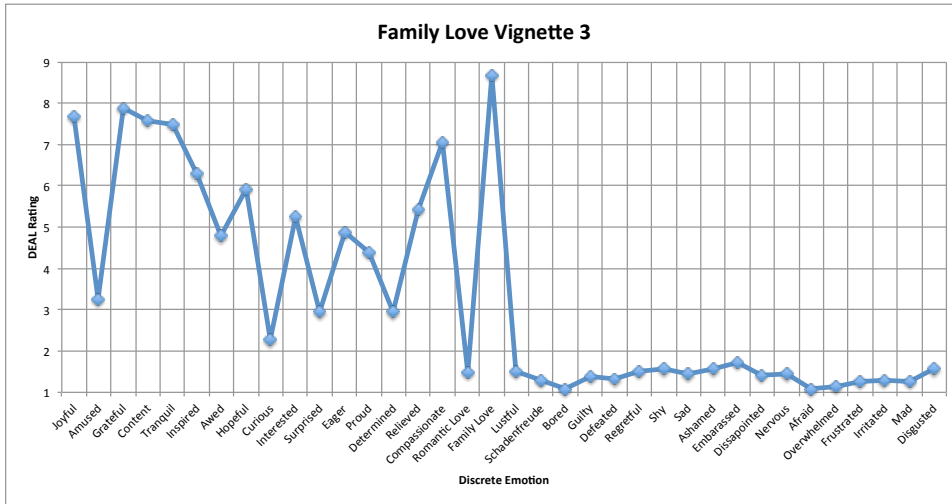
EAGER/ENTHUSIASTIC Vignette 1 (259.01)

You are about to begin new project. You have just purchased a home and you have the big task of decorating each room. Rather than being overwhelmed by the task at hand, you are motivated to get started. You have all of the necessary funds to decorate your new house in a way that matches your vision. You have ordered all of the necessary supplies and embellishments and you have hired workers to help out with the process. You're itching to get started and put in the time and effort needed to establish your dream home.



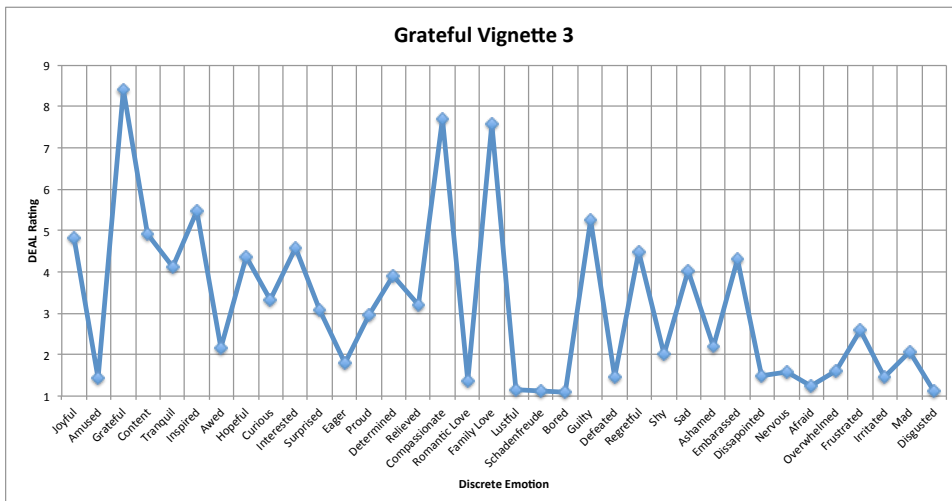
FAMILY LOVE Vignette 3 (362.11)

You are in bed trying to fall asleep. You turn to comforting memories from your childhood. You recall being tucked into bed by your father. Every night when your bedtime came around he would drop everything he was doing to put you to bed. No matter how long and stressful his day was, he would wrap you up in his arms and carry you upstairs. After rocking you back and forth he would tuck you into bed. He would sit beside you with your favorite book in hand. In a calm, low voice your father would slowly read until you fell asleep. As you began to dream, he would kiss the top of your head. After he was sure you were in a deep sleep, he would turn on your nightlight and head back downstairs. Because of this ritual, every night you would go to sleep feeling cherished.



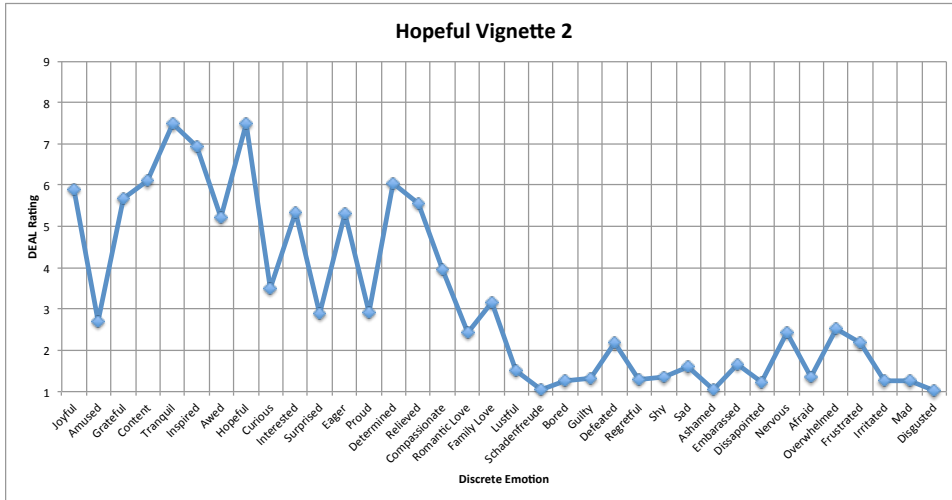
GRATEFUL Vignette 3 (259.94)

You are walking down the city streets on a cool, crisp winter day. You are bundled up but your fingertips and nose still feel the chill. As you follow your typical route home, you pass a homeless man on the sidewalk. He is shivering in nothing but a ragged t-shirt and a thin pair of pants. You sympathize with the struggling man. You buy him a hot cup of coffee, offer him the change in your wallet and wish him all the best. Although you wish you could provide him with more, he is thankful for your good will. When you finally arrive home you are able to escape from the cold. Your loving family meets you. Your mother wraps you up in a big hug and lets you know that there is a hot meal waiting for you. As you settle down at the kitchen table you recognize how lucky you are.



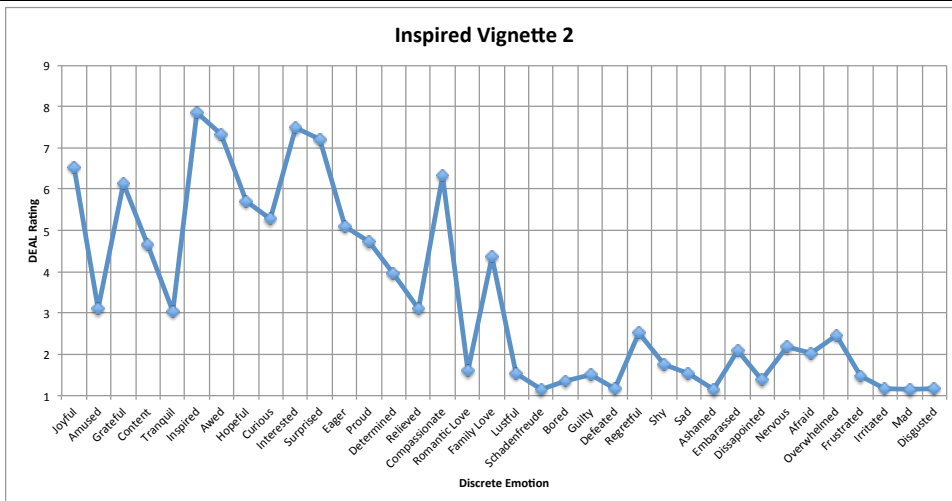
HOPEFUL Vignette 2 (294.07)

Recently, you have been stressed about work and school. Today has been particularly demanding and your mind and body are completely exhausted. You have just about given up. You arrive home and go straight to bed in hopes that sleep will allow you to escape the stress and strain of your daily life. When morning arrives, a stream of light shining through your bedroom curtains gently wakes you. You swing your legs off the side of the bed and make your way to the window. You swing open the adjacent glass door that leads out to your balcony. As you step out, the morning dew kisses your feet and your lungs are filled with crisp, fresh air. The sun is rising in the east. You inhale. The sky is illuminated and you realize that today is a new, better day.



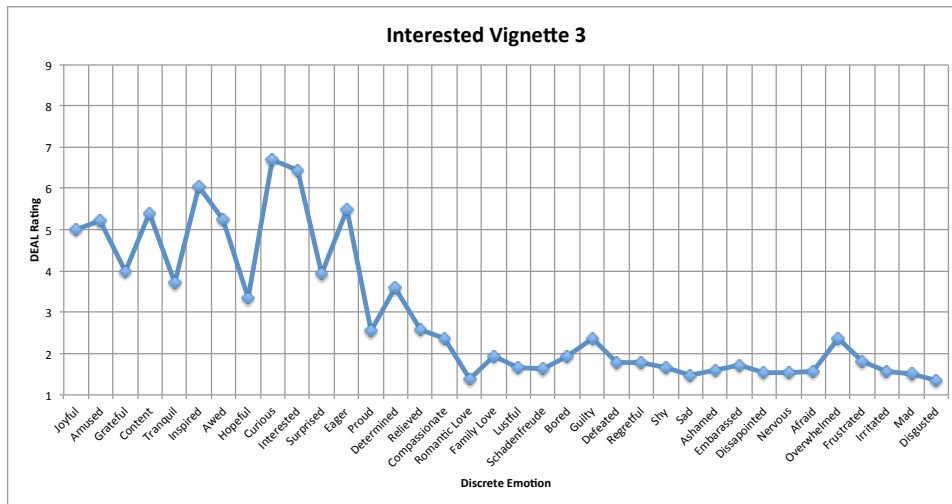
INSPIRED Vignette 2 (335.89)

You are at your doctor's office for a routine checkup. In the waiting room, you notice a neighbor in a sling. Unsure of what happened, you ask if he will share how he hurt himself. Your neighbor is notoriously modest so he is hesitant to tell you his tale. Eventually, he agrees to explain. The other day, he was walking home from his shift in the city when he heard someone screaming. The distressed individual was a seven-year-old girl who was trapped on top of an air-conditioning unit outside of her four-story apartment. He rushed to the child and reached the building just in time to catch the girl as she fell thirty-two feet. The force of this lifesaving catch tore ligaments in your neighbor's arms and shoulder; however, the girl suffered only minor injuries. You are taken back by his rousing act of bravery.



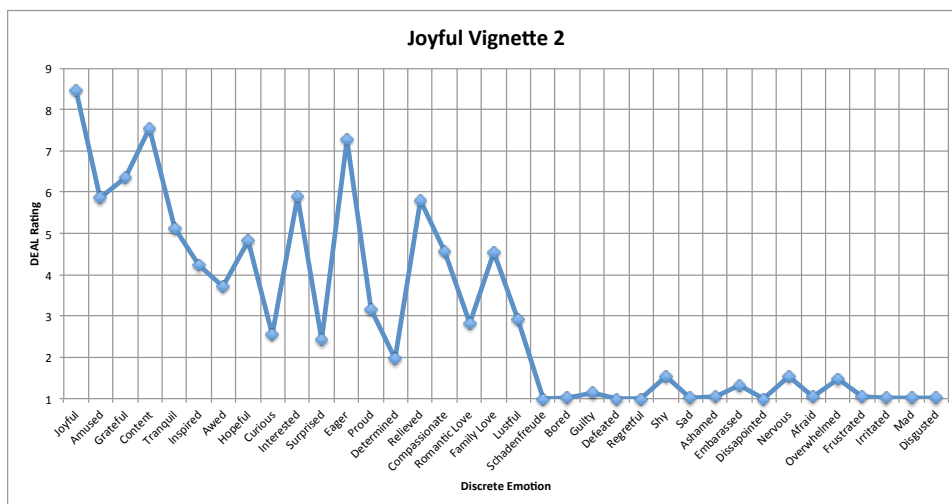
INTERESTED Vignette 3 (211.32)

Your friend sends you a link to a YouTube video. When you ask about the video's content, he tells you it is something you would find thought provoking. You spend time watching and enjoying video. Upon completion you look at the left-hand sidebar. This sidebar lists other related videos. You are intrigued. You notice that many of the suggested videos are on topics related to the video you just enjoyed. You begin clicking on various videos. While each video is interconnected, the topics vary slightly. You are engrossed in the material. Minutes turn to hours as you watch an array of clips, each one more captivating than the last.



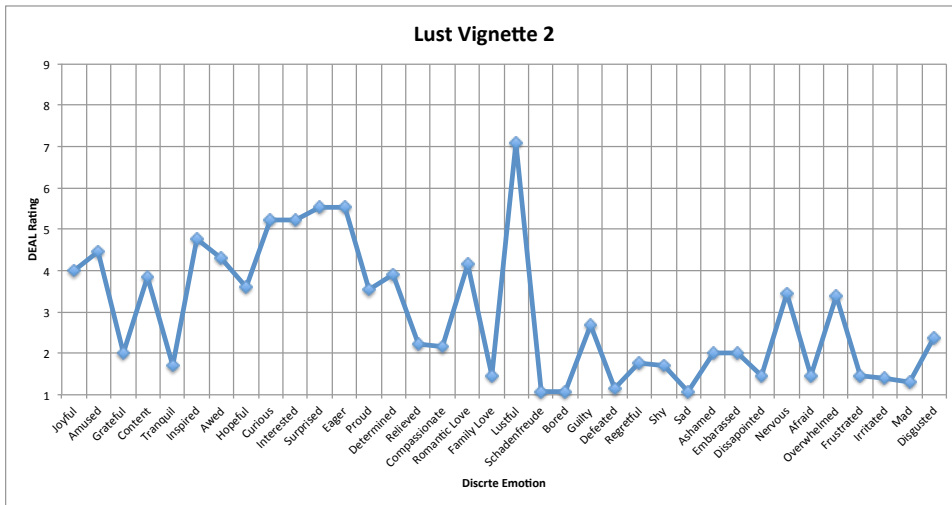
JOYFUL Vignette 2 (274.15)

You receive a phone call from your friend. He lets you know that a bunch of your friends are going out tonight. They have plans to attend a party. This particular party has been talked about for weeks so you know it is going to be a good time. When you arrive at the party, friends and good music surround you. Your favorite song is playing; so, you grab one of your friends by the hand and the two of you set out to dance. Your friend and you laugh as you show off your moves. After dancing, you meet up with everyone else. You all share drinks and enjoyable conversation. The night is filled with plenty of laughter. You find yourself smiling. You are surrounded by wonderful people in an atmosphere where you can easily have fun and let loose.



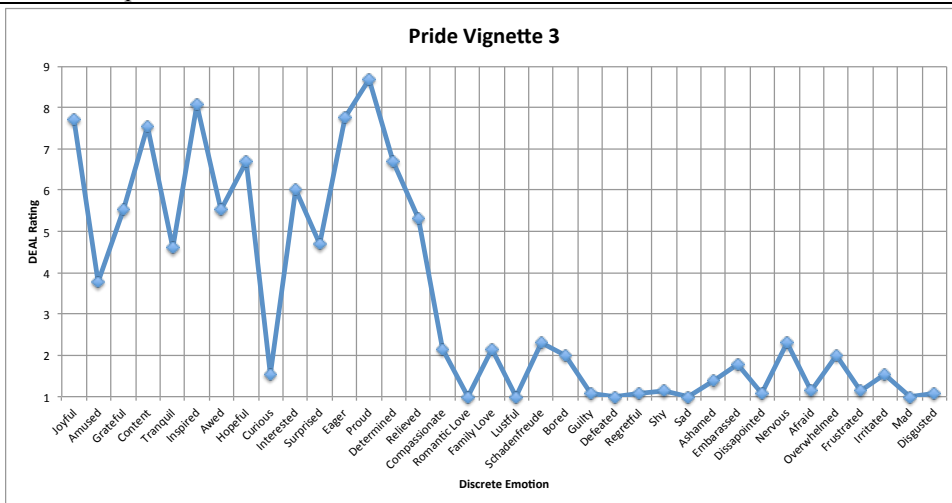
LUSTFUL Vignette 2 (191.76)

(Take heterosexual male perspective) The young secretary bent over the desk to check the faulty connection at the back of her computer. You know that you should be a gentleman and do it for her but as soon as she bends over, you are fixed on her curves and the hemline of her skirt as it slowly begins to ride up. Just before you are afforded a glimpse of her exposed backside, she successfully fixes the internet connection. As she stands up, she turns to you. Wisps of hair fall in front of her face as the two of you lock eyes. She bites her lower lip and slowly makes her way over to your desk. Her outfit is tight enough for you to clearly make out the outline of her womanly figure. She begins unbuttoning the top of her blouse. Her right leg crosses over yours so that she can straddle you. Once she is settled in your lap she nibbles your ear before whispering all of the erotic things she is going to do to you.



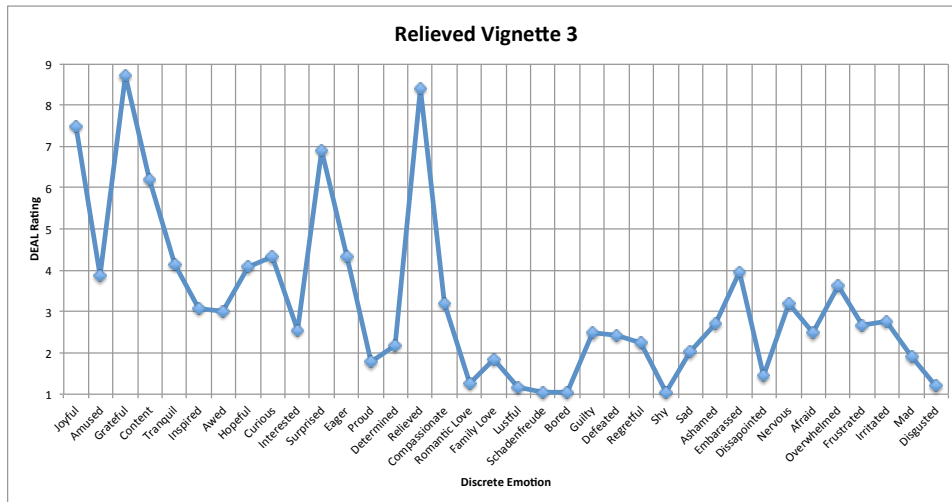
PRIDE Vignette 3 (376.96)

You are a member of your school's acclaimed track team. There is a big upcoming competition and you have been vigorously training to prepare for competition. When the day of the big meet arrives you are nervous but you are confident in your ability to perform. You take your place at the starting line. Your muscles tense and you focus your attention on the singular goal of completing the race in first place. The gun goes off and signals the start of the race. You fly off your block and sprint down the track. Every inch of your body is working in unison to propel you forward. As you pump your arms and legs, the finish line is fast approaching. You leap over the line and victoriously throw your arms up into the air. Not only have you won the race for your team but you have also broken a personal record! Your hard work has paid off and you have the medals to prove it.



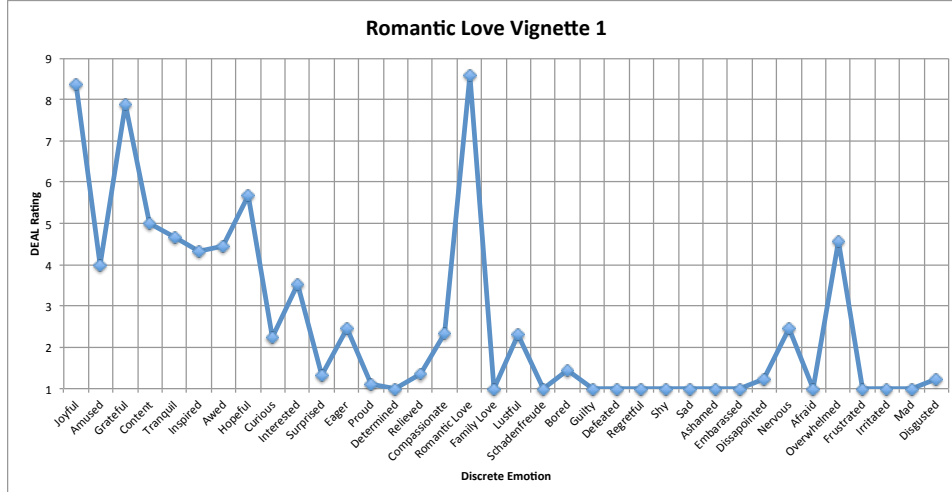
RELIEVED Vignette 3 (271.83)

You wake up in the morning after a fun night out with your friends. You started the evening at dinner and then went to listen to live music downtown. By the end of the night you were happy but exhausted and you remember crawling into bed without bothering to check to see if you had all of your valuables. Now that you're awake you realize you should check to make sure you still have your phone and your wallet. You walk downstairs and thankfully, your phone is on the kitchen counter; however, your wallet is nowhere to be found. You search your entire apartment and the clothing you wore the previous night. You are still unable to locate your wallet. You think to call the restaurant your friends and you ate at but the hostess informs you that no wallet had been found. Stressed about the license, credit cards and cash that are now missing, you almost fail to realize your friend is calling your cell phone. You pick up your phone and your friend informs you that he has your wallet!



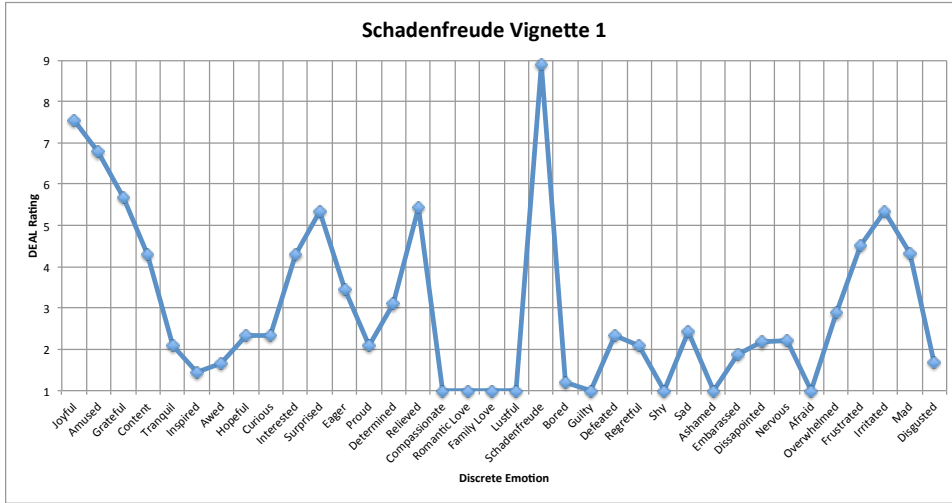
ROMANTIC LOVE Vignette 1 (213.91)

You have been dating your significant other for almost a year. Your anniversary is fast approaching and you are wondering what your boyfriend or girlfriend has planned. On the evening of the big day, your significant other arrives at your house with a gift in hand. They bring you to your favorite restaurant. It is the same restaurant where the two of you shared your first date. As you eat by candlelight, they reach across the table to grab your hand and he or she lets you know how much they adore you. This whimsical night carries on as the two of you enjoy a delicious meal and share how much you mean to one another. In the words of your significant other, you are the only person in the world for them because to him or her, you are perfect.



SCHADENFREUDE Vignette 1 (230.31)

You are on your way to an important interview. In hopes of getting to the location as quickly as possible you hop on the highway and remain in the left hand lane. After ten minutes of driving you hear the roaring of an engine. A speeding car is fast approaching. You try to concentrate on the road and the cars in front of you but before you know it, the careless driver completely cuts you off! You are forced to abruptly break to prevent slamming into the back of his car. You are flustered and annoyed as you watch the out of control car speed away into the distance. You carry on driving but five minutes later you notice the same speeding car pulled over in the emergency lane. He has been stopped by a cop and is receiving a speeding ticket! You grin and spend the rest of the ride basking in the fact that he got caught for his misbehavior.



SURPRISED Vignette 1 (330.62)

The year is 2012. You have just arrived in France for a brief vacation. You have spent your days taking in the iconic sights and enjoying Italian delicacies. So far, your trip has been enjoyable but you haven't experienced anything out of the ordinary. Tonight, you have decided to stay in and rest. You begin your walk back to the hotel. As you near your final destination, your attention is drawn to a handsome couple in an old fashioned car. They appear to be lost and they ask you for directions. After trying to help the two travelers, you engage in pleasant conversation that ends with the couple inviting you to enjoy a night out with them. You abandon your plans for an early night in and hop in the car with your new friends. The three of you finally reach your destination, an old building filled with a lot of people. As you nod your head to a Louis Armstrong tune, you strike up a conversation with a young man with dark hair holding a glass of rum. As he goes on about his recent trip to the running of the bulls and his upcoming novel, "The Sun Also Rises," you realize that you are no longer in the 21st century. Somehow, you have been transported back in time. You are attending a party in the 1920s and your new friend is Ernest Hemmingway!

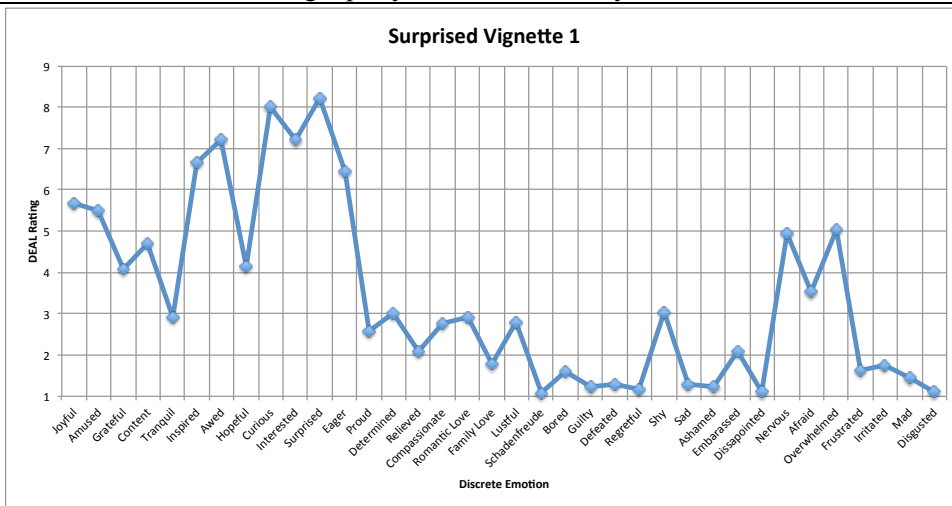


Figure 2: Most Successful Vignettes with Smallest Euclidean Distance

Discussion

In Study 1, the vignettes with the lowest calculated sums of squares determined using Euclidean distance represent the vignettes that get us as close to the idealized profile as possible. In each case, the target emotion also displayed the highest average for the vignette. The identification of these vignettes was our goal and our results indicate that we produced the intended outcome.

We have started to look at inter-correlations by computing average emotional ratings across all vignettes. By calculating the mean rating of each emotion for all 60 vignettes, we can begin to understand the correlational relationship between just the positive emotions (as some may be undifferentiated) and how correlated the emotions are overall. These averages are displayed below in Figure 3.

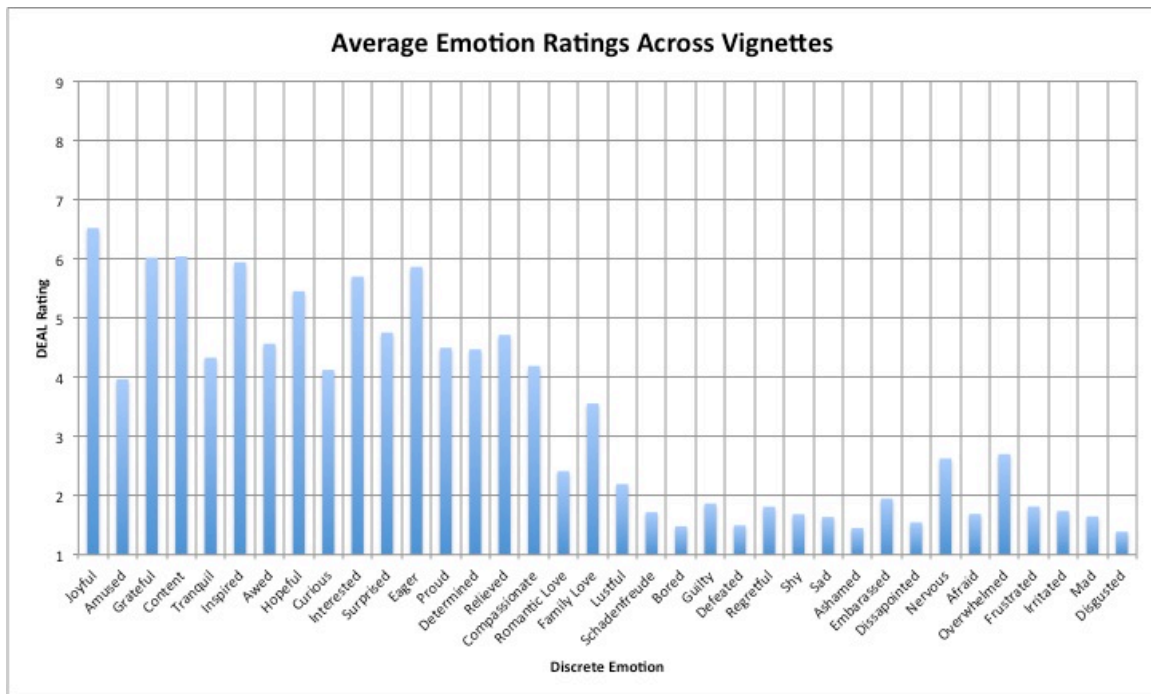


Figure 3: Average Emotion Ratings Across Study 1 Vignettes

The main limitation of Study 1 was excess elicitation. Frequently, vignettes elicited elevated levels of additional positive and negative emotions, which caused the empirical profiles to diverge from the idealized profile. This could be due to a number of reasons. First, positive emotions are frequently blended and experienced simultaneously. Furthermore, certain positive emotions are similar and may not be easily separately identified (e.g., curious and interested). Lastly, certain vignettes could have induced

certain negative emotions before a subsequent positive emotional experience was possible. For example, a vignette may first induce anger or disgust before schadenfreude and amusement.

CHAPTER III

STUDY TWO

In Study 1, we utilized previously constructed vignettes to target 20 discrete positive emotions. Similar to vignettes, films also exhibit high complexity, minimal bias cues, high ecological validity and attentional capture. Study 2 utilizes these valuable characteristics of films to examine the effectiveness of film clips to elicit 18 of the 20 originally studied positive emotions.

Method

Participants & Design

103 undergraduate students from Vanderbilt University participated in Study 2. Participants reported gender (72.8% female) and age. The average age was 20 with a range of 18 to 23 years of age. They were not required to disclose ethnicity. The Institutional Review Board at Vanderbilt University approved all measures and procedures, and all participants provided written informed consent at the start of the study session. All participants were volunteers who received course credit in an undergraduate psychology course in exchange for their involvement. Participants were assigned to an experimental group based on participation order. Table 2 displays the possible group assignments.

Group	Emotions
1	Awed, Compassionate
2	Hopeful, Joyful
3	Calm/Tranquil, Determined
4	Romantic Love, Schadenfreude
5	Inspired, Surprised
6	Amused, Family Love
7	Grateful, Relieved
8	Lust, Pride
9	Interested, Curious

Table 2: Emotion Pairings for Study 2 Groups

Measures

The same measures from Study 1 were used in Study 2.

Apparatus

Surveys and data for Study 2 were also managed using RedCap electronic data capture tools hosted at Vanderbilt University (Harris et al., 2009). Film clips used for Study 2 were managed using Google Drive folders. Each of the 9 groups had an appropriate folder and each of these 9 folders contained two folders, one for each of the emotions.

Emotion Induction

As previously stated, participants were assigned to one of nine possible groups based on their participation order. Each of the nine group allocations corresponded with videos for two emotions and a related RedCap survey. These emotion pairings were created based on the number of films per emotion and the length of said clips such that each experimental group would require a similar amount of viewing time. A complete list of film clips and the format of the group assignment sheet used by the experimenter can be found in the Appendix.

Similar to Study 1, our ultimate goal was to select the most effective films to be used in subsequent emotion induction studies. Study 2 sought to determine which emotional profiles of the 121 films most closely matched the idealized profile.

Procedure

Once registered for Study 2 through SONA, participants individually came into the laboratory in Wilson Hall at Vanderbilt University for their selected hour-long timeslot. The session began with informed consent and a script read aloud by the experimenter (Appendix). Age was obtained through the IRB informed consent form and the experimenter utilized a record sheet to document participant gender.

While the participant completed the IRB consent form, the experimenter made the appropriate film clips and corresponding RedCap survey accessible on the laboratory iMac desktop computer. Participants were instructed to watch two clusters of film clips. Each cluster of five to nine clips was located in a Google Drive folder. The two applicable folders were to be already opened on the desktop. Similar to the vignettes, participants were instructed to watch a film clip using QuickTime and complete the

corresponding portion of the RedCap survey that utilized the DEAL to identify the emotions induced by the most recently viewed clip.

If necessary, participants were allowed to refer back to the film when reflecting on their emotional reaction. Additionally, they were made aware that certain clips required them to take the perspective of a certain character. If that was the case, participants were expected to put themselves in that character's position and attempt to imagine the emotions said character would be feeling. For example, for one of the surprise videos, participants were instructed to take the perspective of the blonde television host who was surprised by her fellow cohosts with an appearance by her favorite actor. Lastly, some clips had to be viewed consecutively. As was the case for "The Lion King" (schadenfreude), if the film title appeared on more than one video clip, participants were asked to watch both clips sequentially and imagine them as a single video before recording their emotional state using the DEAL. Completion of the film viewing and survey completion took approximately one hour.

Analysis

A total of 103 responses were recorded for the 18 discrete positive emotions and their corresponding films. Twelve participants gave ratings for awed and compassionate, 14 for hopeful and joyful, 11 for calm/tranquil and determined, 11 for romantic love and schadenfreude, 11 for inspired and surprised, 12 for amused and family love, 12 for grateful and relieved, 9 for lust and pride and 11 for interested and curious. Average DEAL ratings for each emotion were calculated for all 121 films. With roughly 73% of the participant pool self-identifying as female, the participant pool was too skewed to conduct a meaningful ANOVA to inspect gender differences. Preliminary organization

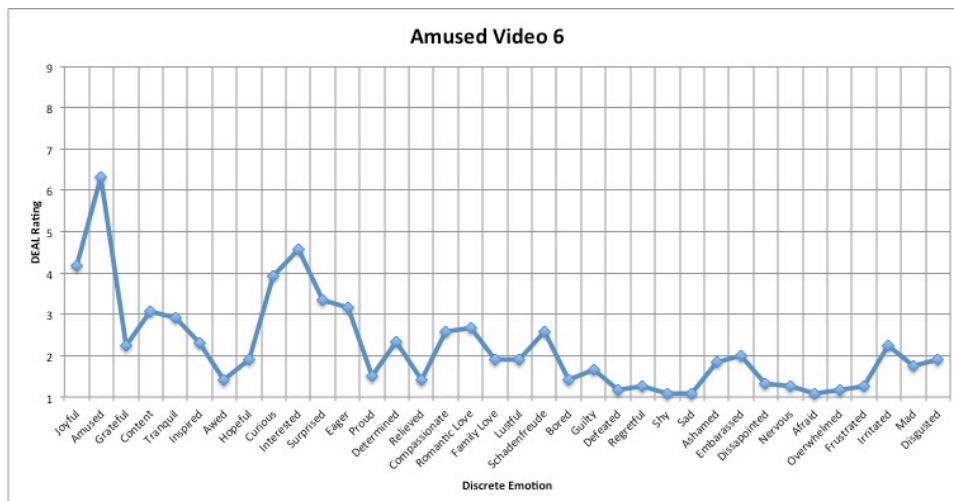
highlighted elevated average DEAL ratings for both positive and negative emotions. The computed averages were used to construct marked line graphs to examine emotional trends for the films.

As in Study 1, the ultimate success of an elicitation method was determined via Euclidean distance calculations with the smallest sums of squares indicating an empirical profile closest to the idealized profile.

Results

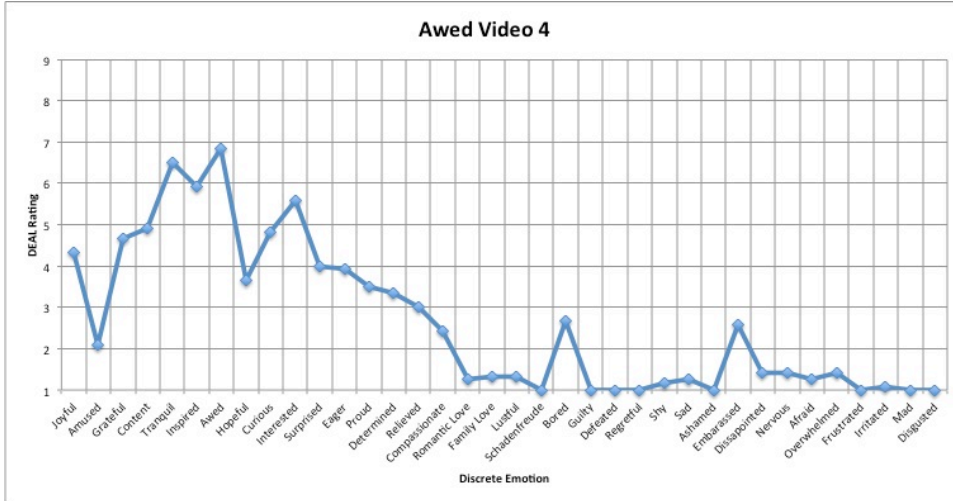
All calculated sums of squares for each of the 121 films are located in the Appendix. The lowest sum of squares value is bolded and is representative of the film that produced an empirical profile most similar to the idealized profile (rating of 9 for target emotion, rating of 1 for all other emotions). The corresponding most successful video and a marked line graph illustrating the emotional profile of said film clip can be found in Figure 3. As with Study 1, the minimum possible value for the sums of squares was 0 and the maximum possible value was 2240.

AMUSED Film 6 (78.23)
“Bridesmaids” (Talking) – Larger female character shares funny interaction with the male passenger sitting next to her on airplane



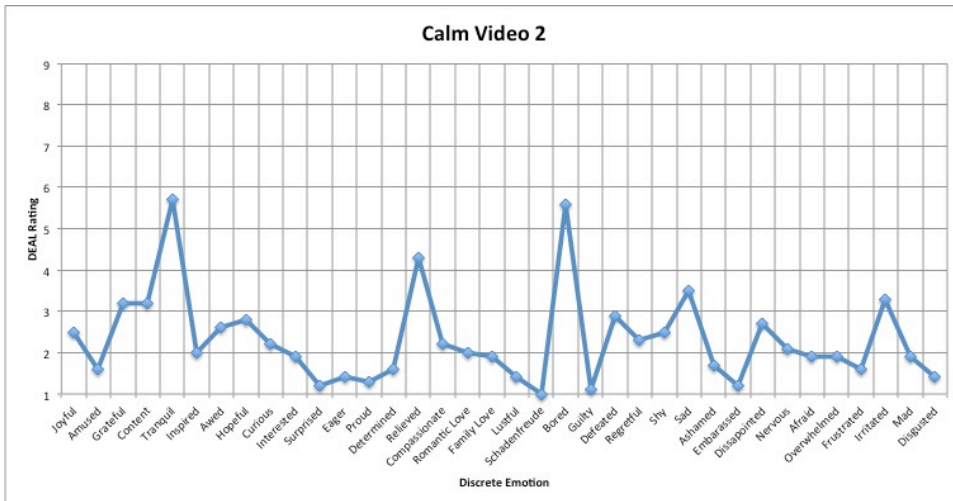
AWED Film 4 (184.38)

Grand Canyon – The clip depicts sweeping scenes of the Grand Canyon paired with music.



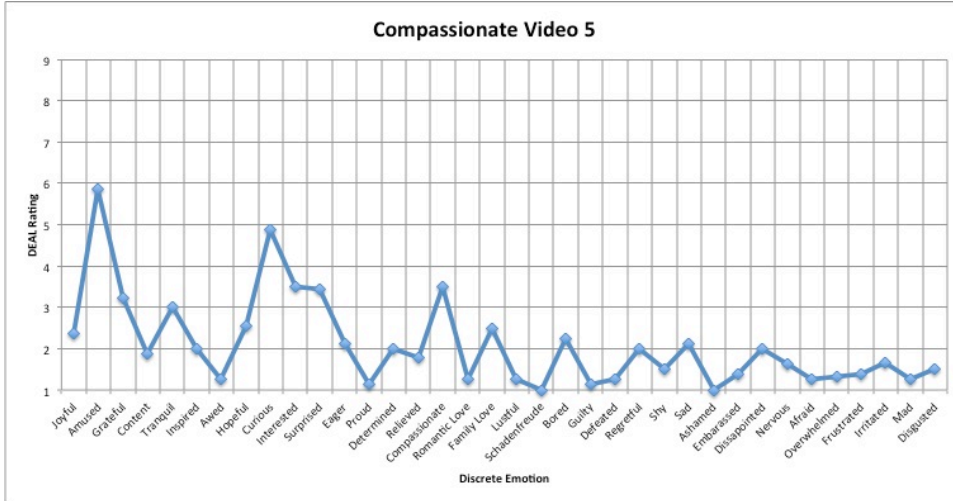
CALM/TRANQUIL Film 2 (95.02)

Rain – Single frame of branch covered with water droplets and rain falling with rain sounds in background



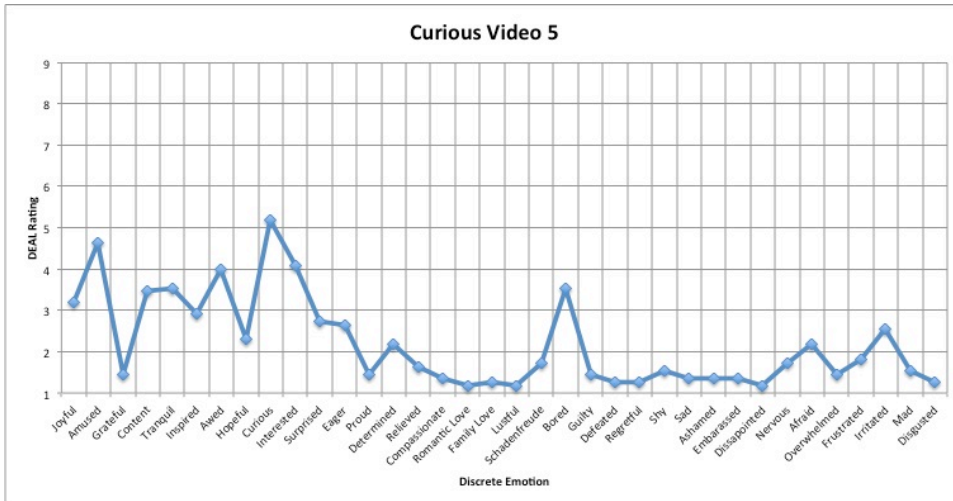
COMPASSIONATE Film 5 (108.32)

“Love and Other Drugs” – Anne Hathaway’s character is suffering from Parkinson’s and attends a support group with others afflicted by the disease



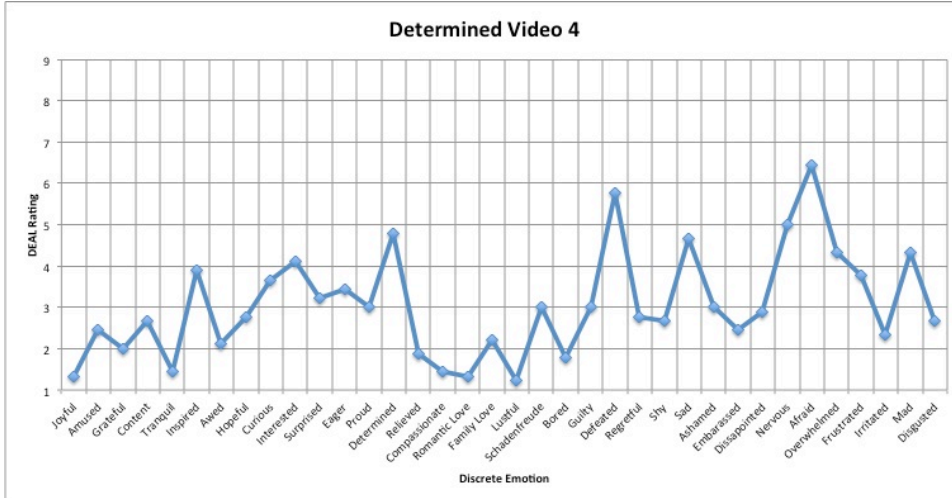
CURIOUS Film 5 (90.76)

“Alice in Wonderland” (Cartoon) – Alice curiously inspects a rabbit hole



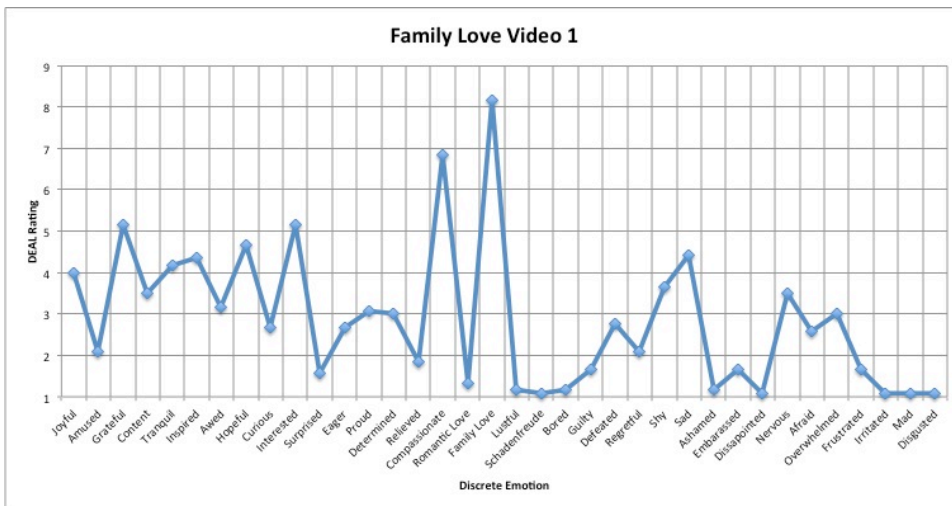
DETERMINED Film 4 (211.69)

“300” (1) – Main character speaks to blonde character before acknowledging all of the Spartans and ending with the claim, “Tonight, we dine in hell”



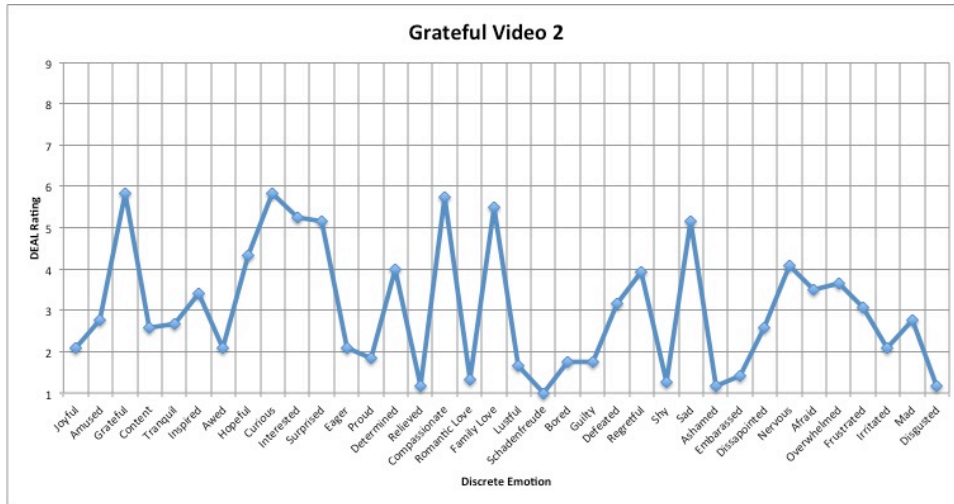
FAMILY LOVE Film (177.62)

"Ramona & Beezus" - Older sister comforts younger sister who is unable to fall asleep



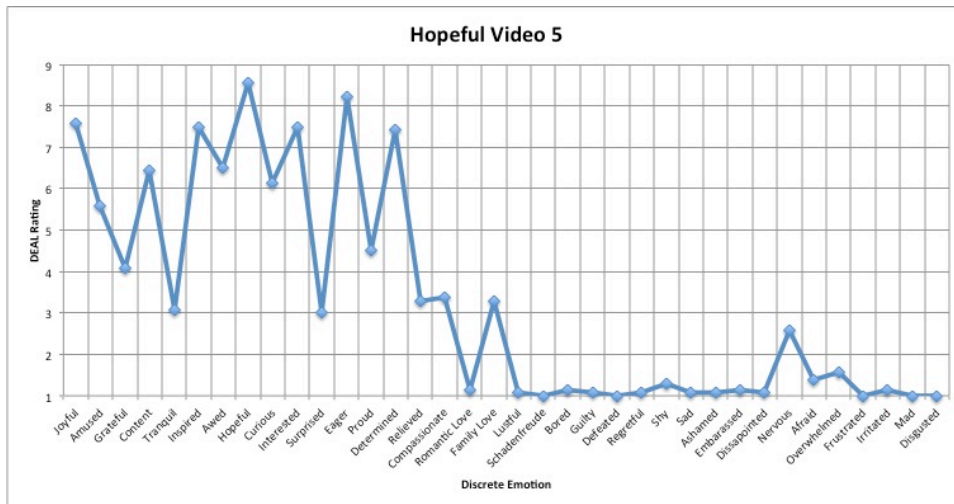
GRATEFUL Film 2 (216.67)

“50:50” – A look into the experience of battling cancer

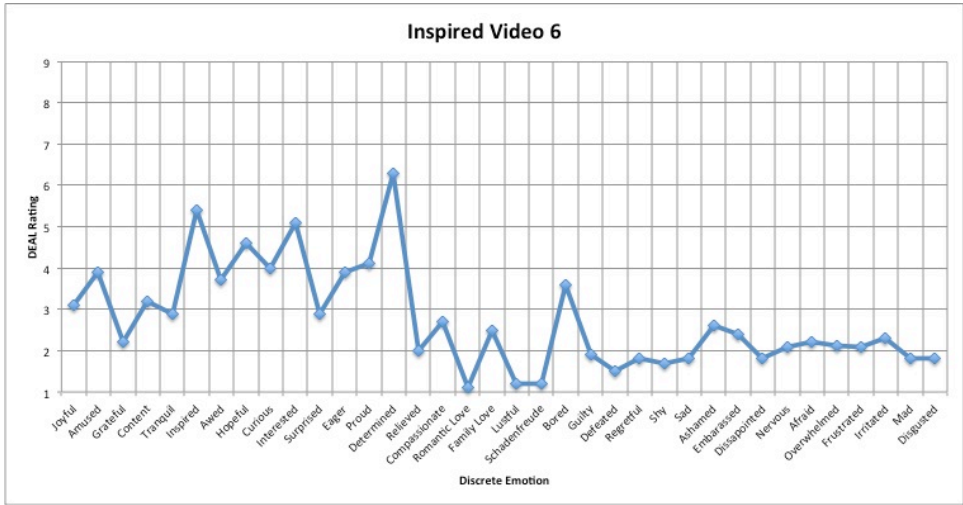


HOPEFUL Film 5 (377.56)

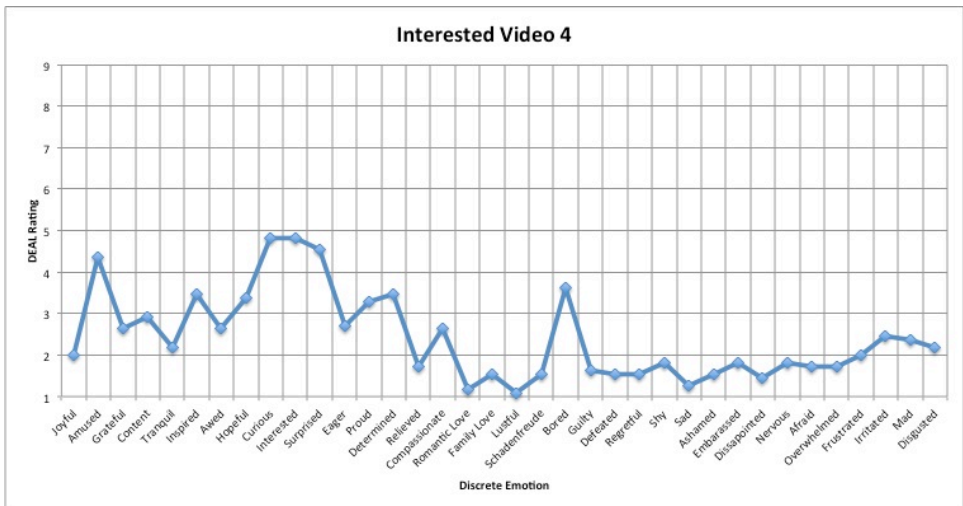
“The Wizard of Oz” – The main cast skips and sings down the yellow brick road



INSPIRED Film 6 (160.49)
“Star Wars” – Luke Skywalker accepts advice from Yoda

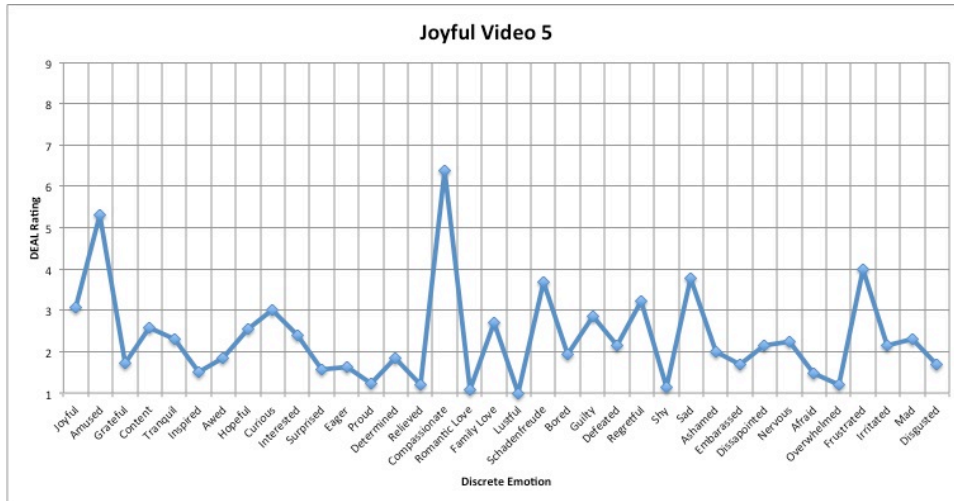


INTERESTED Film 4 (115.85)
“Scent of a Woman” – Audience pays close attention to interesting lawyer during a court case



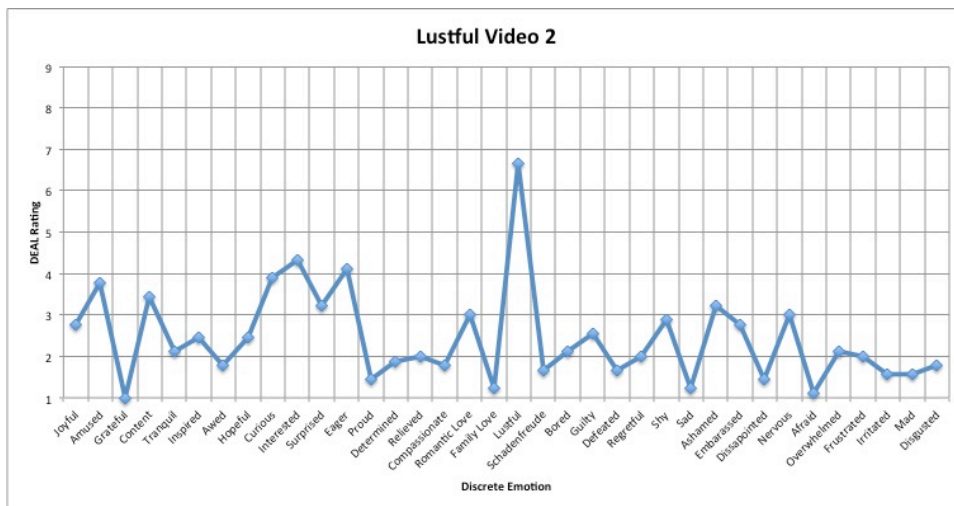
JOYFUL Film 5 (143.60)

Puppy Can't Get Up – Small white puppy is shown rolling back and forth on its back

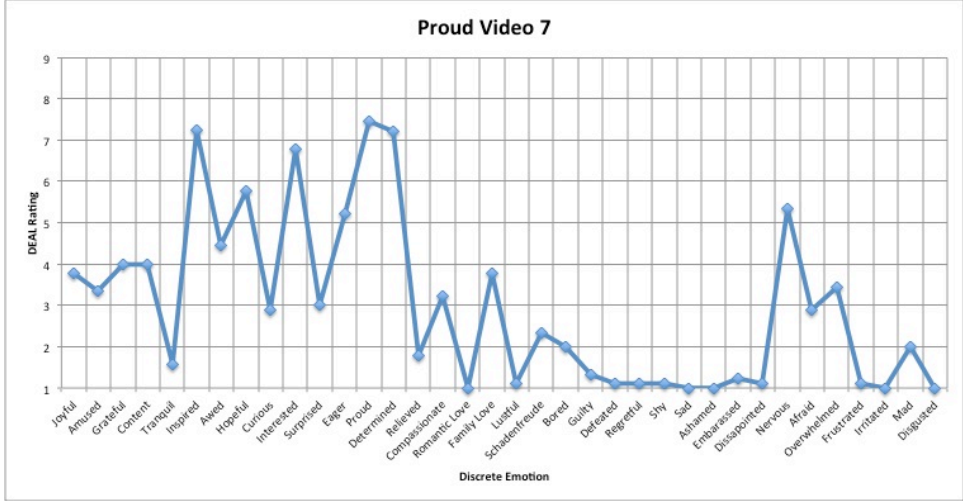


LUSTFUL Film 2 (93.95)

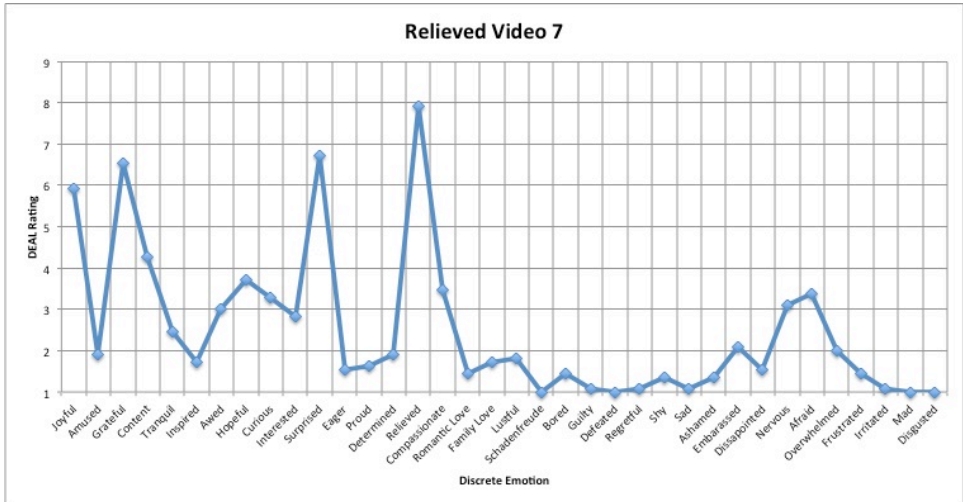
“Desperate Housewives” – One of the housewives is seduced by a younger man



PRIDE Film 7 (250.73)
“Crimson Tide” – Triumphant battle scene

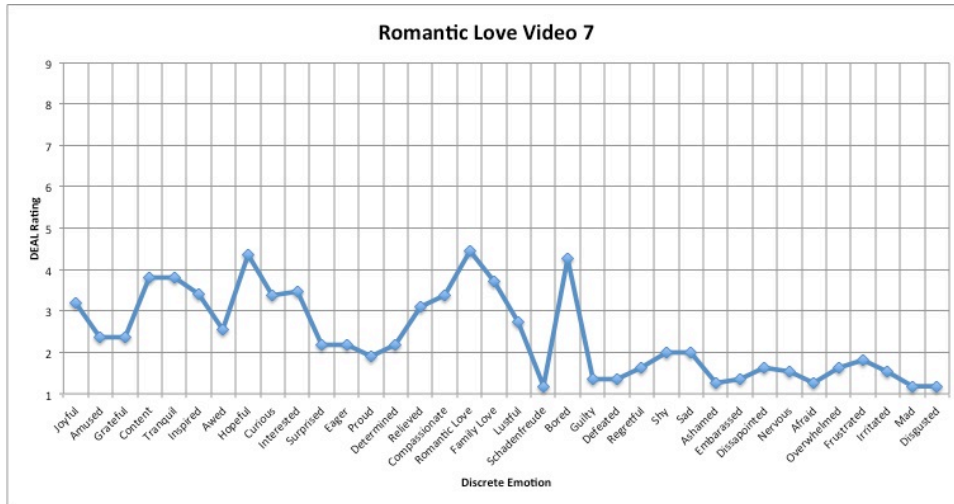


RELIEVED Film 7 (145.05)
“The Double” – Audience watches to see if the young woman falls from the ladder in a library



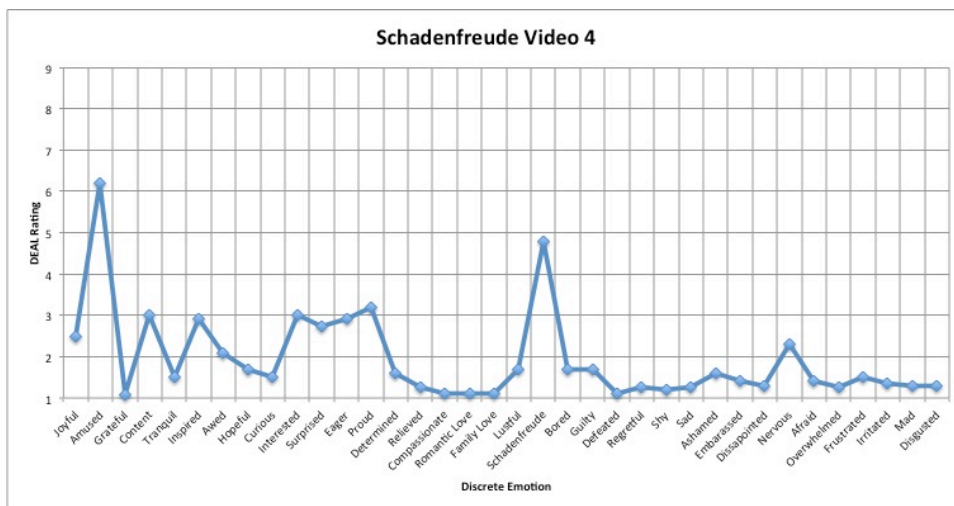
ROMANTIC LOVE Film 3 (100.71)

“She’s All That” – Main couple meet by the pool after prom and share a romantic moonlit dance



SCHADENFREUDE Film 4 (77.48)

“Mean Girls” – The film’s antagonist is faced with her own weight problems



SURPRISED Film 3 (204.08)
“E.T.” – Little boy takes flight on a bike with E.T.

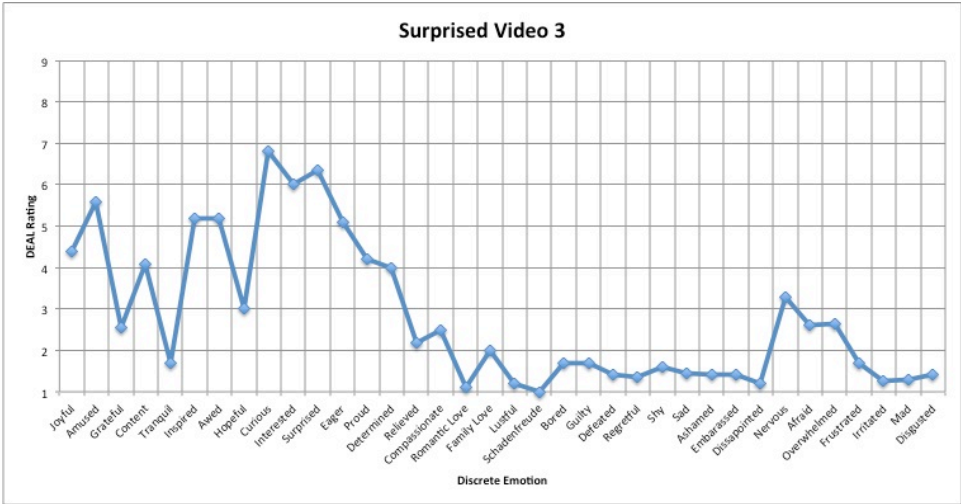


Figure 4. Most Successful Films with Smallest Euclidean Distance

Discussion

As with Study 1, our goal was to validate videos that elicit high levels of the target emotion and relatively low levels of all other emotions. In Study 2, the films with the lowest calculated sums of squares determined using Euclidean distance represent the films that get us as close to the idealized profile as possible. The identification of these films was our goal and our results indicate that we produced the intended outcome.

We have started to look at inter-correlations by computing average emotional ratings across all films. Much like Study 1, the mean rating of each emotion for all 121 films provides the first step to understanding the correlational relationship between

positive emotions and emotions in general. These averages are displayed below in Figure 5.

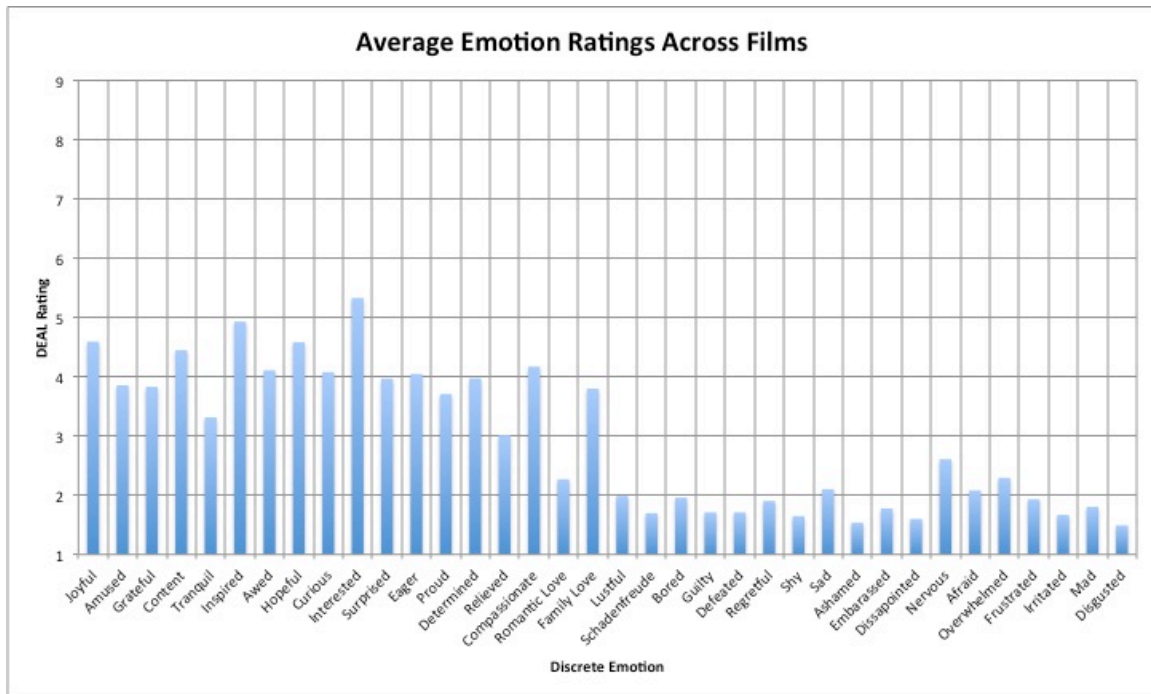


Figure 5: Average Emotion Ratings Across Study 2 Films

The main limitation of Study 1 was still applicable to Study 2 as elicitation methods that target a single positive emotion are restricted by the blending effect. As with Study 1, films frequently elicited elevated levels of additional positive emotions and certain films even induced relatively high levels of negative emotions. Study 2 was also limited due to time constraints. Because each time slot was only one hour, participants were only able to view and provide feedback for film clips for two discrete positive emotions. Furthermore, familiarity with particular movies, television shows and the commercials clips were drawn from may have skewed emotional induction results.

CHAPTER IV

GENERAL DISCUSSION

The current studies signified the next steps towards validating the vignettes and video clips constructed and collected in my undergraduate honors thesis. The goal of Study 1 and Study 2 was to select the most effective materials for 18-20 discrete positive emotions to be used in subsequent emotion induction studies. We sought to target elicitation methods that prompt high levels of the target emotion in comparison to all other emotions so they may be utilized in future experiments. We narrowed our findings to the most successful 20 vignettes and 18 film clips that presented empirical profiles most similar to the idealized profile. While these results are promising, the elicitation methods are restricted by the blending effect that prevents the production of a perfect emotional profile (rating of 9 for target emotion, rating of 1 for all other emotions).

The results from Study 1 provided us with a single best vignette for each of the 20 positive emotions based on calculated Euclidean distances (sums of squares) that demonstrated a similarity between resulting empirical profiles and the idealized profile. The results from Study 2 provided us with a single best film clip for each of the 18 positive emotions based on the same sums of squares criteria used in Study 1. Those films with the overall smallest sums of squares indicate which elicitation methods produced empirical profiles that were most similar to the idealized profile and may be used in future emotional induction studies. When the vignettes and films with the best empirical profiles are compared to the vignettes and films first in rank-ordering from my

undergraduate thesis, some of the strongest elicitation methods match up; however, the majority of the films and vignettes do not. This is likely because my undergraduate thesis disclosed the target emotion and only sought a ranking for said emotion. The current studies take into account levels of 35 additional positive and negative emotions; thus, the highlighted elicitation methods in Study 1 and Study 2 provide more accurate materials.

Limitations and Future Directions

The main limitation of the present studies was reduced differentiation among positive emotions. As previously stated, positive emotions are rarely experienced independently. For example, when an individual finds something amusing, he or she may also feel joy. Additionally, certain emotions may be identified before the target emotion is experienced. For example, an elicitation method may cause a participant to feel overwhelmed or nervous before experiencing the target emotion of relief. This array of emotional experiences may cause the empirical profile to diverge from the idealized profile.

Key confounding variables during data collection also include prior mood, gender personality traits and physiological reactions. Often times, required participation in SONA experiments are seen as an annoyance to busy Vanderbilt students; thus, the mood prior to experimentation is unlikely neutral. Future studies should begin by establishing a baseline mood or by inducing a neutral mood prior to the study, as this procedure would mimic previous emotion elicitation studies and increase the validity of elicitation methods (Gross & Levenson, 1995). Future studies should also seek to maintain an equal distribution of male and female participants. Emotional reactivity and sensitivity may

vary by gender. Personality traits and styles of future participants could be noted to account for potential effects on emotional reactions. Lastly, physiological reactions are similar across emotions and may result in varied reporting. For example, excitement is known to increase heart rate and perspiration however; the same is true for the negative emotion, anger. Although we did not assess physiology, it is likely that some participants reported their emotions based off of some aspect of their physical response. For this reason, we may choose to integrate physiological measures to collect heart rate, skin conductance and blood pressure levels in future studies. Although research has not specifically linked autonomic system activation with the experience of discrete emotions, physiological measures would allow us to examine the differences between autonomic system activation across the various positive emotions and said measures may also serve as a pre-study baseline.

The findings of Study 1 and Study 2 are also limited in relation to their report measures and participation rates. The use of self-report measures of emotions may be problematic in that not every individual translates an emotional experience into the same set of adjectives. While the emotional list was extensive, certain words (e.g., curiosity, interest) may be confused with one another. Both studies were limited in the number of participants reporting for each elicitation method. Time constraints forced us to separate the emotions into 10 separate groups for Study 1 and nine separate groups for Study 2. This distribution limited the quantity of data collected for each vignette and film. Ideally, our data would have been made stronger with the use of a larger participant pool. This pool is also limited by the participant demographics. Solely Vanderbilt undergraduate

students completed rankings in Study 1 and Study 2; thus, education and age were largely stable and may have produced slightly biased results.

Lastly, participants in Study 2 may have been influenced by previous exposure to certain film clips. If an individual had previously seen the film, television show or commercial a clip was cut from, their previous knowledge of the plot and characters or a personal connection or memory related to the content may have skewed their emotional reaction. On a similar note, participants may have had trouble experiencing the intended emotion due to the limited time invested in each film. Because each clip was restricted in length, participants may have been unable to empathetically engage with the characters' emotional experiences.

If future studies edit and improve upon the vignettes and film clips and utilize a larger participant pool, validated elicitation techniques may be used in both a laboratory setting as well as in clinical settings. More specifically, techniques that cleanly elicit a target positive emotion can be used for buffering. The buffering hypothesis states that a particular emotional resource (positive emotion) can protect a person from the adverse effects of a stressful event (Cohen & Wills, 1985). In a buffering study, researchers would utilize films and vignettes from our database to elicit high levels of the target discrete positive emotions and relatively low levels of all other emotions. After the positive emotional induction, participants are presented with stressful stimuli (e.g., traumatic scene). If our elicitation techniques are successful, the prior positive emotion provocation should reduce the level of stress the stimuli induce in the participant. Support for the buffering hypothesis has important implications since the successful use of positive emotions to protect individuals from the effect of stressful

events may be applied in treatment and/or counseling situations. For example, an individual in therapy for a phobia could largely benefit from validated positive emotion inductions. The induction of a single or multiple positive emotions prior to exposure to the feared stimulus may reduce a patient's negative reaction to said stimulus. The hope would be that, over time, this lessened reaction would help an individual overcome their phobia(s).

In supplementary studies highlighting these elicitation methods, we would also like to look at the average of each emotion rating across all vignettes and films to find specific patterns of correlation. This understanding of which emotions themselves are the most highly correlated may be paired with a factor analysis to see if certain emotions should be combined as our study results indicate subjects aren't differentiating enough between them.

Conclusion

The present study supports the possibility of creating elicitation methods that produce empirical profiles most similar to the idealized profile. Study 1 was conducted to assess emotional profiles produced by 60 vignettes in relation to 20 discrete positive emotions: (1) amused (2) awed/amazed (3) calm/tranquil (4) compassionate (5) curious (6) determined/motivated (7) eager/enthusiastic (8) family love/caring/devotion (9) grateful/appreciative (10) hopeful/optimistic (11) inspired (12) interested/engaged (13) joyful/happy (14) lust/attraction (15) proud/triumphant (16) relieved/unburdened (17) romantic love (18) satisfied (19) schadenfreude (20) surprised/astonished. The results of

Study 1 indicated the strongest vignette for each of the 20 emotions that were closest to the idealized profile.

Study 2 was conducted to assess emotional profiles produced by 121 film clips in relation to 18 discrete positive emotions: (1) amused (2) awed/amazed (3) calm/tranquil (4) compassionate (5) curious (6) determined/motivated (7) family love/caring/devotion (8) grateful/appreciative (9) hopeful/optimistic (10) inspired (11) interested/engaged (12) joyful/happy (13) lust/attraction (14) proud/triumphant (15) relieved/unburdened (16) romantic love (17) schadenfreude (18) surprised/astonished. The results of Study 2 indicated the strongest film clip for each of the 18 emotions that were closest to the idealized profile.

Studying the elicitation of discrete positive emotions through vignettes and films is a relatively new concept within psychological research. Although our completed study did not identify elicitation methods that produced flawless idealized profiles, the results did provide elicitation methods with empirical profiles most similar to the idealized profile and said results provide the first steps in establishing a validated database that may be used to advance future empirical emotional studies and clinical treatments.

REFERENCES

- Algoe, S. B., Fredrickson, B. L., & Gable, S. L. (2013). The social functions of the emotion of gratitude via expression. *Emotion, 13*(4), 605-609.
- Bechara, A., Damasio, H., & Damasio, A. R. (2000). Emotion, Decision Making and the Orbitofrontal Cortex. *Cerebral Cortex, (10)*, 295-307.
- Catanzaro, S. J., & Greenwood, G. (1994). Expectancies for negative mood regulation, coping, and dysphoria among college students. *Journal of Counseling Psychology, 41*, 34-44.
- Carver, C. S., & Scheier, M. F. (1998). *On the self-regulation of behavior*. New York: Cambridge University Press.
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-57.
- DeSteno, D., Li, Y., Dickens, L., & Lerner, J. S. (2014). Gratitude: A tool for reducing economic impatience. *Psychological Science, 25*(6), 1262-1267.
- Ekman, P. (1992). An argument for basic emotions. *Cognition and Emotion, 6*, 169-200.
- Ellsworth, P. C., & Smith, C. A. (1988). *Shades of joy: Patterns of appraisal differentiating pleasant emotions*. *Cognition and Emotion: 2*, 301-331.
- Evans, G. W., Bullinger, M., & Hygge (1998). Chronic noise exposure and physiological response: A prospective study of children living under environmental stress. *Psychological Science, 9*, 75-77.
- Folkman, S., & Moskowitz, J. T. (2000). Positive affect and the other side of coping. *American Psychologist, 55*, 647-654.

- Fredrickson, B.L. (2001). The Role of Positive Emotions in Positive Psychology: The Broaden-and-Build Theory of Positive Emotions. *American Psychologists*, 56, 218-226.
- Fredrickson, B. L. (1998). *What good are positive emotions?* Review of General Psychology, 2(2), 300-319.
- Fredrickson, B. L., Tugade, M. M., Waugh, C. E., & Larkin, G. R. (2003). What good are positive emotions in crises? A prospective study of resilience and emotions following the terrorist attacks on the United States on September 11th, 2001. *Journal of Personality and Social Psychology*, 84(2):365-376.
- Fredrickson B. L., Maynard, K. E., Helms, M. J., Haney, T. L., & Siegler, I. C. (2000). Hostility predicts magnitude and duration of blood pressure response to anger. *Journal of Behavioral Medicine*, 23(3), 229-243.
- Fridja, N. H. (1987): Emotion, cognitive structure, and action tendency, *Cognition & Emotion*, 1(2), 115-143.
- Gross, J. J., & Levenson, R. W. (1995). Emotion elicitation using films. *Cognition and Emotion*, 9, 87-108.
- Harris, P. A., Taylor, R., Thielke, R., Payne, J., Gonzalez, N. and Conde, J. G. (2009). Research electronic data capture (REDCap) – A metadata-driven methodology and workflow process for providing translational research informatics support, *J Biomed Inform.* April;42(2):377-81.
- Isen, A. M., Daubman, K. A., & Nowicki, G. P. (1987). Positive affect facilitates creative problem solving. *Journal of Personality and Social Psychology*, 21, 384-388.
- Keltner, D., & Gross, J. J. (1999). Functional Accounts of Emotion. *Cognition &*

- Emotion, 13(5).*
- Khansari, D. N., Murgo, A. J., & Faith, R. E. (1990). Effects of stress on the immune system. *Immunology Today, 11*, 170-175.
- Kimmerling, R. N. (2014). Examining gratitude and physical health. *Physiological Psychology & Neuroscience, 74*.
- Kolodyazhniy, V., Sylvia, D. K., Gross, J. J., Roth, W. T., & Wilhelm, F. H. (2011). An affective computing approach to physiological emotion specificity: Toward subject-independent and stimulus-independent classification of film-induced emotions. *Psychophysiology, 48*, 908-922.
- Mayer, J. D., & Allen, J. P. (1995). Mood inductions for four specific moods: A procedure employing guided imagery vignettes with music. *Journal of Mental Imagery, 19(2)*, 151-159.
- Pandey, R., & Choubey, A. K. (2010). Emotion and health: An overview. *Projective Psychology & Mental Health, 17(2)*, 135-152.
- Philippot, P. (1993). Inducing and assessing differentiated emotional feeling states in the laboratory. *Cognition and Emotion, 7*, 171-193.
- Reynaud, E., Guedj, E., Souville, M., Trousselard, M., Zendjidjian, X. (2013). Relationship between emotional experience and resilience: An fMRI study in fire-fighters. *Neuropsychologia, 51(5)*, 845-849.
- Roseman, I. J., & Smith, C. A. (2001). Appraisal theory: Overview, assumptions, varieties, controversies. In K. R. Scherer, A. Schorr, & T. Johnstone (Eds.), *Appraisal processes in emotion: Theory, methods, research* (3-19). New York: Oxford University Press.

- Rottenberg, R., Ray, R., & Gross, J. (2007). Emotion elicitation using film. In J.A. Coan & J. J. B. Allen (Eds.), *Handbook of Emotion Elicitation and Assessment*, (pp. 91 – 105). New York: Oxford University Press.
- Sandel, J. K. (2008). *The effects of trauma exposure, emotional intelligence, and positive emotion on resilience*. (Doctoral dissertation). Retrieved from ProQuest (AAI3296067).
- Schaefer, J. A., & Moos, R. H. (1992). Life crises and personal growth. In B. Carpenter (Ed.), *Personal coping: Theory, research, and application* (pp. 149-170). Westport, CT: Praeger.
- Smith, C. A., & Lazarus, R. (1990). Emotion and Adaptation. In L. A. Pervin (Ed.), *Handbook of Personality: theory and research*, 609-637, NY: Guilford Press.
- Snyder, C. R., Lopez, S. J., & Teramoto Pedrotti, J. (2011). *Positive Psychology: The scientific practical explorations of human strengths*. Los Angeles, CA: SAGE Publications.
- Taylor, S. E., Kemeny, M. E., Reed, G. M., Bower, J. E., & Gruenewald, T. L. (2000). Psychological resources, positive illusions, and health. *American Psychologist*, 55, 99-109.

APPENDIX

Discrete Emotion Adjective List (DEAL)

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 my feelings at all		Characterized my feelings somewhat		d my feelings extremely well
1)	Surprised Astonished	13)	Hopeful Optimistic	25)	Eager Enthused Excited
2)	Guilty Culpable	14)	Bored Detached Uninterested	26)	Embarassed Humbled
3)	Defeated Resigned Beaten	15)	Nervous Anxious Apprehensive	27)	Dissapointed Let down
4)	Relieved Unburdened	16)	Overwhelmed Overloaded Rattled	28)	Content Satisfied Amazed
5)	Tranquil Calm Serene	17)	Proud Triumphant	29)	Amused Entertained
6)	Frustrated Thwarted Exasperated	18)	Afraid Frightened	30)	Inspired Motivated
7)	Regretful Remorseful Sorry	19)	Sad Downhearted Blue	31)	Curious Intrigued
8)	Determined Purposive	20)	Ashamed Disgraced	32)	Compassionate Sympathetic
9)	Shy Timid Bashful	21)	Disgusted Repulsed Revolted	33)	Romantic Love Amorous
10)	Grateful Thankful Appreciative	22)	Irritated Annoyed	34)	Lustful Passionate
11)	Interested Engaged	23)	Awed Wondrous	35)	Family Love Affectionate
12)	Mad Angry Irate	24)	Joyful Happy Glad	36)	Schadenfreude <i>(To take pleasure in the misfortune of another)</i>

Study 1 Complete Set of Vignettes

AMUSED		
1	2	3
<p>You have just sat down at your favorite restaurant. You are with your best friend. The two of you place your lunch orders. As you wait for your food to arrive, your friend informs you that he has a story to share. You believe your friend is a particularly funny guy; so, you are looking forward to an intricate and entertaining story. He begins to spin his tale. As the story progresses it becomes increasingly humorous. You watch as he completes impersonations and uses his hands to make grand gestures. He provides you with vivid details that make the story even more comical and believable. You develop a cramp from laughing hysterically. Your friend smiles at you, pleased at how much you are enjoying his account.</p>	<p>Everyone has been raving about a newly released film. Even critics have praised this comedy. You decide to see the movie so you can find out if the film is truly as funny as everyone claims it is. Your best friend gladly agrees to go to the movies with you. The two of you purchase popcorn and settle down in the theater. The film has a promising beginning and you find yourself growing more and more entertained. Half way through the film you are bent over with laughter. The characters are developed and endearing. The dialogue is hilarious. Every time you think you have heard the best line of the movie, another joke is delivered that sends you into a fit of laughter. You think this film may truly be the comedy of the year!</p>	<p>You are at the dinner table with your family. Your father is a notoriously funny man who never misses an opportunity to tell a joke. Tonight is no different. Your father calls everyone's attention to him as he begins to speak. His joke is entertaining at first. You and your siblings exchange glances and smiles. Finally, he gets to the punch line. During his delivery you are sipping on water. His phrasing is so hilarious that your drink comes streaming out of your nose and mouth. Your whole family and you burst out into laughter over this funny joke and your even more comical reaction.</p>
AWED		
1	2	3
<p>You are on a family trip to Arizona. One day you and your family go to see the Grand Canyon. You get there and your first view of the canyon is from a high ledge that overlooks the Rio Grande. You can see for miles. You look into the endless depths of the canyon. The rocks are layered in warm reds and oranges. The sky meets the top of the canyon and the contrast of the cloudless blue sky makes the canyon's colors that much more intense. You take a deep breath and gaze all around you. It is almost hard to believe that nothing you see is manmade. This view is unlike anything you have ever witnessed. It becomes clear to you that the earth is a captivating and powerful force.</p>	<p>You are on a trip to Costa Rica. Since your arrival your travel companions and you have met trustworthy local friends. One afternoon, they take all of you to explore the rainforest. You are witness to towering trees, tropical flowers and exotic animals. As you come to the end of a walking path, you reach an opening. You exit the foliage and you are faced with a large body of clear water set in front of a cascading waterfall. You are so struck by this natural beauty that you are unable to take another step. You gaze at the stunning cascade of water. The waterfall's immense power has left you speechless.</p>	<p>On a trip to Australia you decide to visit The Great Barrier Reef. It is a cloudless, warm and sunny afternoon. A tour guide takes your friends and you out on a boat. When you are far enough out in the Pacific ocean, your tour guide equips you with snorkeling gear and a wetsuit. As the boat comes to a halt, you all drop into the warm ocean. The water is crystal clear. You look down to find vibrant coral and tropical fish. You are taken back by this oceanic wilderness. You turn as a sea turtle brushes your side. You are speechless. It is clear to you why The Great Barrier Reef has been named one of the seven natural wonders of the world.</p>

CALM/TRANQUIL		
1	2	3
<p>You are on a summer vacation. You have no work to worry about. You are on the ideal tropical island. Here you can spend your time relaxing without any stress or burdensome thoughts weighing on your mind. One of your lazy vacation days is coming to a close. You find yourself out on the balcony of your hotel room. You are looking out on the calm ocean. Your breath slows and you let go of any bodily tension. You take in the summer smells and the sounds of the water lightly lapping against the sandy shore. The air is warm and the sun is setting in shades of yellow, orange and purple.</p>	<p>You have been overworking yourself recently. Your close friend suggests you sign up for a meditation class. Desperate to try anything to reduce your stress level, you make a reservation at a local meditation studio. You arrive to the class in your most comfortable clothing. The meditation room is dimly lit. The thermostat is set to a comfortable temperature and you enjoy the smell of burning incense. The teacher instructs you to become aware of your breathing. You take a deep breath in through your nose and allow your stomach to expand as you inhale. After holding your breath for a few seconds, you breathe out of your mouth slowly, allowing your body to completely relax on the outward breath. With each breath your mind is becoming more clear and focused. You are instructed to concentrate on the tension held within different body parts before releasing this tension through exhalation. As the meditation class continues, you can feel your breathing become slow and rhythmical.</p>	<p>You have had a great week at work. You closed a very important deal and to treat yourself, you decide to make an appointment for a massage. Upon arriving at the spa you are placed in a private room to await your masseuse. The lights are dim and you take in the smell of scented candles as your ears are filled with the light sound of a running brook. You lay stomach-down on the massage table. You feel warm and comfortable under a soft but light blanket that covers your entire body. The masseuse enters the room and their demeanor soothes you. You are asked to take 3 long, deep breaths. The masseuse applies warm oil to your back and places one hand on top of the other before circling around and applying pressure to each shoulder blade. Next, the masseuse spreads their hands with a thumb on either side of the spine. Starting at the base, they run to the top and gently back down with increasing pressure. As the massage continues your muscles release all tension and your breath slows.</p>
COMPASSIONATE		
1	2	3
<p>You believe it is your mission to help the sick and the needy. You spend most of your free time volunteering in homeless shelters and soup kitchens. If you ever stumble across a person in need you are quick to offer any assistance you are capable of providing. Today, you meet a young man who has been laid off from his job. He has led a rough life and a recent accident in the factory he was employed by has left him crippled and broke. You feel for this struggling man; so, you offer to take him out for a hot meal. After lunch you bring him to a shelter where he is provided clean clothing and a place to sleep. You believe it is your mission to help get him back on his feet; so you will do everything in your power to find him a new place of employment.</p>	<p>You are walking home from your job when you stumble across a homeless person. At first you do not recognize her but you soon realize that the two of you attended the same high school. You say hello and she shares her story. Unfortunately, she was recently evicted. With nowhere to go, she took to the streets where she has been living, sleeping and begging for change. You believe the landlord was too harsh on the young girl. You feel for your suffering classmate and in an attempt to alleviate her misery, you offer her a spot on your couch. Until she is able to support herself or find somewhere else to live, you are more than willing to help out this girl in need.</p>	<p>Recently your neighbor experienced severe financial woes as a result of the failing economy. You have a feeling of deep sympathy for your neighbor because he has a wife and children who are depending on him to provide. Stricken by misfortune, the family is facing possible eviction if they cannot increase their household income. Your strong desire to alleviate their suffering pushes you to offer help. Although your own resources are limited, you are willing to watch their children for free so that they can spend their time searching for jobs.</p>
CONTENT/SATISFIED		
1	2	3
<p>This year, your immediate family is hosting Thanksgiving. The day before, everyone pitches in to help prep and cook for the upcoming meal. When Thanksgiving day arrives, you sit down to a vast variety of food. You pile your plate high with buttery mashed potatoes and creamy gravy, fresh vegetables and homemade biscuits. The turkey sits as the centerpiece, its brown, crispy skin shimmering under the dining room lights. You devour warm slices of turkey topped with cranberry sauce. After dinner you help yourself to a steaming slice of apple pie topped with a decadent scoop of creamy vanilla ice cream. As the meal comes to a close, you are full but not too stuffed. You make your way to the couch where you revel in the delicious meal you just consumed.</p>	<p>You have been working hard at your new job. You have been a diligent employee who comes to work early and leaves late when necessary. You have been producing quality work, developing meaningful relationships with superiors and coworkers and you try to maintain a positive attitude while in the work environment. Today is payday and you are hoping that your first check reflects your obvious devotion to this career. Upon opening the check you discover that you have been awarded a fair pay. You are pleased with your salary. It is enough to pay for your necessities and assure that you are able to lead a comfortable life.</p>	<p>You have just moved into a new apartment. You are content with the space but you are ready for your new home to be fully decorated. You hire an interior designer who shares your vision. Together the two of you decide on furniture and artwork. You believe the choices the two of you have made will accent the rooms in a way that makes the apartment feel both stylish and comfortable. When all of the installation is complete, the interior decorator reveals the work she has done in each room. You are pleased with the decisions she has made. You feel as though the time and money you have put into decorating your apartment have been well worth it.</p>

CURIOUS		
1	2	3
<p>There is a wooded area behind your house. This wooded area is vast and dense but it is not intimidating. Rather than dark and gloomy, the area appears bright and full of life. You have not previously searched this area but recently, the idea of heading into the woods has entered your mind. You have just finished a novel that inspires exploration. In this novel, the main character goes on a journey. At one point of this journey they discover an enchanted forest. In this forest they find interesting animals and other wildlife. It is in these woods where they set out on their most exciting adventure yet. This story makes you wonder what is waiting in your own forest. The novel has inspired whimsical visions that fuel a desire to find out what lies in your own backyard.</p>	<p>You are enrolled in a very thought-provoking class. The teacher engages the students and has turned a normally boring topic into a subject that you yearn to learn more about. Because of this course, you have a thirst for knowledge on this particular topic. You plan to enroll in related courses next semester but until then you find yourself in the library searching databases and books for more information. You have a marked desire to investigate and learn about this field of study. You seek to nourish your inquisitive interest by attending office hours to chat with your professor and by acquiring any and all educational material that can teach you more about your new favorite subject.</p>	<p>You receive a phone call from your friend. He sounds confused and as the conversation continues you realize that he is unsure of what he did last night. After a night out, your friend is unable to recall where he went or what he did. He is not nervous or upset but he is seeking your help. He wants you to try to piece together his night. You are entertained by the thought of solving this mystery. You wonder what he could have done, where he could have been and whom he could have met. You are inquisitive as you ask him plenty of questions in an attempt to piece together this puzzle.</p>
DETERMINED		
1	2	3
<p>You are a member of one of your university's valued sports teams. It is half time during the championship game and the scoreboard reads 6-10. Your team is down by four points but your coach makes you and your fellow teammates realize that winning is not only possible but also inevitable. Your coach emphasizes how hard your teammates and you have worked throughout the long season. If each person is willing to dig deep and leave their heart on the field then your team will be recognized as champions. As halftime comes to a close, your teammates and you all throw your hands in for one last rallying chant. You step back out onto the field fired up and ready to give 100%. You know that your team will be victorious.</p>	<p>You have spent the past few months applying for jobs. There is a particular position that seems perfect for you. Luckily, you are asked to come in for a formal interview. You gladly accept the opportunity. You purchase a flattering interview outfit that makes you look both attractive and professional. You are sure to read up on the company. You also prepare a list of talking points so that you will appear knowledgeable and intelligent. On the day of the interview, you arrive at the business. You feel positive and assured that you have prepared appropriately for this big day. You recognize that this will be a challenging interview but you are not nervous. You are sure that you are capable of succeeding and attaining a job offer.</p>	<p>For the past few years you have been struggling with your weight. Previously, you were not concerned about making any large lifestyle changes but recently you have realized that you truly want to shed the extra pounds. You begin by registering for a gym membership. You then set up an appointment with a nutritionist who works with you to create a meal plan that you are sure you can stick with. You feel fired up. While losing weight will not be easy, you feel capable of your ability to reach your goal. You are confident in the vision you have of your future self; and with the support of your friends and family, you know that you can and will push yourself until your goal is achieved.</p>
EAGER/SATISFIED		
1	2	3
<p>You are about to begin new project. You have just purchased a home and you have the big task of decorating each room. Rather than being overwhelmed by the task at hand, you are motivated to get started. You have all of the necessary funds to decorate your new house in a way that matches your vision. You have ordered all of the necessary supplies and embellishments and you have hired workers to help out with the process. You're itching to get started and put in the time and effort needed to establish your dream home.</p>	<p>For the past few years you have been supporting a particular charity. You are devoted to this cause and you are constantly trying to raise awareness and money. This year you are the head of a local fund raising event for this charity. You are fervently recruiting volunteers. You have printed out flyers and you are utilizing social media to get the word out. You have been spending all of your free time organizing the event. Your dream is to produce the most successful fund raising event possible. While some of your friends have told you that you are over zealous, you know that you are just motivated to raise money for such a worthy cause. You are ready and willing to do whatever it takes to bring positive attention and support to this special charity.</p>	<p>You are completely devoted to your career. Your boss and coworkers have even noticed how much time and effort you put into your work. More often than not, you are the first to arrive at the office. You are always early and on the off chance that you are late you are sure to inform your superiors about your delay. In the morning, you greet everyone with friendly hellos and you ask your coworkers how they are doing and if there is anything they need help with. While at work, you are always on task and you are happy to take on new undertakings when it is required. Your work is always completed with precision and with a smile. Your boss never hears you complain because you enjoy your job and you are always ready to get to work.</p>

FAMILY LOVE		
1	2	3
<p>You are heading home for the holidays. After a long day of traveling you arrive at the front steps of your childhood home. Before you are able to ring the doorbell, the door swings open. Your mother is standing in the doorway with outstretched arms and a huge smile on her face. She embraces you, kissing your cheek and letting you know how happy she is to have you home. It is a cold winter day but the house is toasty and you can smell savory aromas drifting out from the kitchen. When you enter the kitchen the remaining members of your family warmly greet you. You see that they have prepared all of your favorite foods. You are hugged once again before settling down to a home cooked dinner with your loved ones.</p>	<p>You have an older brother who you look up to. Unfortunately, his new job has taken him away from home and you rarely get to spend quality time with him. Recently, you have been in contact with him. You let him know how much you miss him and how it would mean the world to you if he would visit you. To your surprise, he takes time off of work and heads home. The two of you spend the weekend going out for meals; taking leisurely walks through town, hanging out and reminiscing about shared pastimes. During his stay it is obvious how much you mean to your brother. You will forever remember and cherish the new memories the two of you made during his stay.</p>	<p>You are in bed trying to fall asleep. You turn to comforting memories from your childhood. You recall being tucked into bed by your father. Every night when your bedtime came around he would drop everything he was doing to put you to bed. No matter how long and stressful his day was, he would wrap you up in his arms and carry you upstairs. After rocking you back and forth he would tuck you into bed. He would sit beside you with your favorite book in hand. In a calm, low voice your father would slowly read until you fell asleep. As you began to dream, he would kiss the top of your head. After he was sure you were in a deep sleep, he would turn on your nightlight and head back downstairs. Because of this ritual, every night you would go to sleep feeling cherished.</p>
GRATEFUL		
1	2	3
<p>It is November. This year your parents are holding Thanksgiving at your childhood home. Everyone in your immediate family and many members of your extended family are in attendance. Each person has helped in the meal preparation or they have brought a side dish for the table. Your house feels warm and joyous as your many friends and family members can be heard chatting and laughing. Everyone is enjoying the drinks and appetizers that have been put out. When it is time to sit down for the main meal, you find yourself seated next to your best friend and favorite sibling. As you look around the table you see not only an abundance of delicious food but also the people who mean the most to you. Everyone is in good health and in high spirits. You are lucky to be spending Thanksgiving with the people who mean the most to you.</p>	<p>You are a senior in high school. Ever since you can remember, you have had your heart set on a particular university. You have worked hard on your application. You envision yourself enrolling in the college of your dreams. In December, you hear back from the university's registrar office. You have been accepted! You tell your parents the wonderful news. You know that economic times are tough and your parents do not have a large income. There is little room for extra or extravagant spending. You recognize that college is expensive but when you tell your parents about your acceptance they have a plan. They tell you they are willing to take out loans and make other financial cuts in order to make your dream come true. You embrace your generous parents and thank them for their selfless sacrifices.</p>	<p>You are walking down the city streets on a cool, crisp winter day. You are bundled up but your fingertips and nose still feel the chill. As you follow your typical route home, you pass a homeless man on the sidewalk. He is shivering in nothing but a ragged t-shirt and a thin pair of pants. You sympathize with the struggling man. You buy him a hot cup of coffee, offer him the change in your wallet and wish him all the best. Although you wish you could provide him with more, he is thankful for your good will. When you finally arrive home you are able to escape from the cold. Your loving family meets you. Your mother wraps you up in a big hug and lets you know that there is a hot meal waiting for you. As you settle down at the kitchen table you recognize how lucky you are.</p>
HOPEFUL		
1	2	3
<p>As a recent graduate of a high-ranking university, you are currently on the hunt for a fulfilling job. You have scored an interview with an impressive company. On the day of the interview you arrive at the office feeling prepared, confident and overall excited to let the interviewer know how qualified you are for the position. As the interview comes to a close, the employer lets you know that they were very impressed with both your resume and the way in which you presented yourself. Upon leaving the office, the interviewer shakes your hand, smiles and lets you know that you should expect to hear good news from their office in a couple of days. You are filled with excitement and you leave the office with high expectations.</p>	<p>Recently, you have been stressed about work and school. Today has been particularly demanding and your mind and body are completely exhausted. You have just about given up. You arrive home and go straight to bed in hopes that sleep will allow you to escape the stress and strain of your daily life. When morning arrives, a stream of light shining through your bedroom curtains gently wakes you. You swing your legs off the side of the bed and make your way to the window. You swing open the adjacent glass door that leads out to your balcony. As you step out, the morning dew kisses your feet and your lungs are filled with crisp, fresh air. The sun is rising in the east. You inhale. The sky is illuminated and you realize that today is a new, better day.</p>	<p>You have just entered a new relationship with a significant other. You and your new partner have been spending a lot of time together. The two of you spend your days enjoying mutual interests and partaking in fun activities. Additionally, you are spending one-on-one time that has allowed you to learn more about one another. Although the two of you have just started seeing each other, your bond is strengthening as you spend more and more enjoyable time together. As you envision a marvelous future to this relationship, you are unable to see any potential negative outcomes. You know that the relationship is in its infancy but you truly feel that this will grow into a healthy partnership that will be able to last.</p>

INSPIRED		
1	2	3
<p>Your mother asks you to drive to the preschool to pick up your younger sibling. You arrive at the school and enter the building. When you reach the classroom, you spot your brother sitting in the corner surrounded by three students. The teacher recognizes you and comes over to say hello. After you exchange pleasantries, you ask if the children are your brother's new friends. She informs you that yes, your brother has befriended the three children. She also tells you that they are blind. Your brother has proven to be a great friend to them. He has been spending every afternoon answering their questions and explaining to them in vivid detail what different animals, people, scenery and objects look like. The teacher tells you that she has never come across a student that is as generous and supportive as your little brother.</p>	<p>You are at your doctor's office for a routine checkup. In the waiting room, you notice a neighbor in a sling. Unsure of what happened, you ask if he will share how he hurt himself. Your neighbor is notoriously modest so he is hesitant to tell you his tale. Eventually, he agrees to explain. The other day he was walking home from his shift in the city when he heard someone screaming. The distressed individual was a seven-year-old girl who was trapped on top of an air-conditioning unit outside of her four-story apartment. He rushed to the child and reached the building just in time to catch the girl as she fell thirty-two feet. The force of this lifesaving catch tore ligaments in your neighbor's arms and shoulder; however, the girl suffered only minor injuries. You are taken back by his rousing act of bravery.</p>	<p>Your family friend has a child that was born with a rare immune deficiency condition. He is in desperate need of a bone marrow transplant. His family is at a loss. They are unsure of who to turn to or how to raise funds. A young member of your town has gotten word of this family's dilemma and she has made it her mission to raise the money necessary for the bone marrow transplant. With the use of her connections and a strong desire to help out the deserving boy, she establishes a website that reaches out to the community at large. Within 48 hours, she has managed to collect more than \$15,000. Because of her willpower and unyielding determination she has raised enough money to pay for the procedure that will save the young boy's life.</p>
INTERESTED		
1	2	3
<p>Everyone is talking about a new, must read book. Unfortunately, the book is sold out in all major retail stores! The novel is the ideal genre and your favorite author has written it. You spend week after week trying to get a hold of this legendary book but you keep turning up empty handed. Then, one day while walking down your city's streets, you spot the elusive novel in a used bookstore window! Once you start reading, you realize how truly special this novel is. The book is well written and the storyline is extremely thought provoking. This book keeps you on your toes. It is your first day reading this new novel and you are almost halfway done! You cannot seem to put it down. With each new discovery and plot twist it becomes harder and harder to pull away from this incredible book.</p>	<p>You attend a seminar on a topic that peaks your curiosity. Attendance is not mandatory but the seminar's focus is appealing and the lecturer is renown. You sit down at the front of the lecture room. You are so close to the speaker that it is as if he is speaking directly to you. Each sentence that comes out of their mouth is carefully crafted and the stories they string together are enchanting and thought provoking. As he continues with the seminar you pay attention to every detail as each word increases your concentration. You realize time is flying by but that is no matter because you could easily spend all day listening to this scholar educate you and your fellow students.</p>	<p>Your friend sends you a link to a YouTube video. When you ask about the video's content, he tells you it is something you would find thought provoking. You spend time watching and enjoying video. Upon completion you look at the left-hand sidebar. This sidebar lists other related videos. You are intrigued. You notice that many of the suggested videos are on topics related to the video you just enjoyed. You begin clicking on various videos. While each video is interconnected, the topics vary slightly. You are engrossed in the material. Minutes turn to hours as you watch an array of clips, each one more captivating than the last.</p>
JOYFUL		
1	2	3
<p>You are driving home from work. Your fuel is low so you stop at a gas station to refill your tank. When you go inside to pay the cashier you decide to purchase a pack of gum. While reaching for your favorite brand you notice a display of scratch-off lottery tickets. Although you do not usually play the lottery, these tickets boast prizes as grand as one million dollars. You decide to spend the five dollars to purchase a single ticket. As you walk back out to your car you use a dime from your pocket to scratch away each circle. As each image and number is revealed you realize that you won two hundred dollars! You unintentionally squeal and rush back inside to claim your winnings--smiling from ear to ear.</p>	<p>You receive a phone call from your friend. He lets you know that a bunch of your friends are going out tonight. They have plans to attend a party. This particular party has been talked about for weeks so you know it is going to be a good time. When you arrive at the party, friends and good music surround you. Your favorite song is playing; so, you grab one of your friends by the hand and the two of you set out to dance. Your friend and you laugh as you show off your moves. After dancing, you meet up with everyone else. You all share drinks and enjoyable conversation. The night is filled with plenty of laughter. You find yourself smiling. You are surrounded by wonderful people in an atmosphere where you can easily have fun and let loose.</p>	<p>You are driving in your car. You are on a road trip to visit a longtime friend. You have the week off; so you have no work to worry about. Without any burdens, you are stress-free and looking forward to seeing your old friend. You know that the two of you will have an enjoyable weekend during which you will make many new memories. You look out onto the open road that is stretched before you. The sky is clear and the sun is bright enough to gently warm your face through the windshield. The radio is playing lightly in the background but your ears catch a familiar sound. You turn the radio on high. Your favorite song is playing. It is upbeat and you cannot help but tap your left foot. The music fills the entire car and you begin belting out the words. Your heart soars and your head nods in sync with the rhythm. Your mouth widens into a huge smile.</p>


LUSTFUL		
1	2	3
<p>You are locked away in a room with someone you find irresistible. Wrapped in their arms, you feel a surge of anticipation rush through your body. You are hungry for their touch. Their head dips down and you lock eyes. Their expression is appreciative and longing. Their lips brush yours. They are soft but not tentative. Their touch is skilled and deliberate as they trace the outline of your lips with the tip of their tongue. They nibble and suck your bottom lip. Their caress against your skin darts arousal throughout your body. You tremble. Their tongue flicks against the seam of your lips and you part them, eager for more of this erotic experience. They taste sweet. They plunge their hands through your hair as your arms circle around their waist and you begin to explore their back. Your bodies are plastered together. You can feel the pounding of each other's heartbeat.</p>	<p>(Take heterosexual male perspective) The young secretary bent over the desk to check the faulty connection at the back of her computer. You know that you should be a gentleman and do it for her but as soon as she bends over, you are fixed on her curves and the hemline of her skirt as it slowly begins to ride up. Just before you are afforded a glimpse of her exposed backside, she successfully fixes the internet connection. As she stands up, she turns to you. Wisps of hair fall in front of her face as the two of you lock eyes. She bites her lower lip and slowly makes her way over to your desk. Her outfit is tight enough for you to clearly make out the outline of her womanly figure. She begins unbuttoning the top of her blouse. Her right leg crosses over yours so that she can straddle you. Once she is settled in your lap she nibbles your ear before whispering all of the erotic things she is going to do to you.</p>	<p>In your wildest dreams, you never imagined that your old flame would be attending your family member's wedding. But here they are, a vision with sun-lit hair and tropical-blue eyes. Their defined jaw and striking face still takes your breath away. While you two previously parted ways, the desire still burns. You eye them from across the room and it becomes apparent that they are staring back at you. It is clear that your frank sexual interest is being matched by their intense hunger. Neither of you bother trying to hide your desires. When you are given the opportunity, the two of you steal away into a quiet room. The next thing you know, you are face-to-face, breathless. As you begin to undress each other, you kiss and instantly, an irresistible need flares up inside of you. You yearn for more.</p>
PRIDE		
1	2	3
<p>You are sitting in class, anticipating the return of a midterm you took a few weeks ago. You recall the hours of diligent studying you did in preparation for this exam. You knew this would be a difficult course, and you stayed on top of your work throughout the weeks in order to set yourself up for success on the midterm. Right now, you are impatient to get your grade back and see if the fruits of your labor paid off. Indeed, when the professor finally hands you your graded midterm, you see that you got an A+ and thoroughly aced the exam! Any doubts that you had about the time and effort you devoted to your studies have evaporated, replaced by a validation for the hard work and immense dedication that you have invested into your education. You knew you could ace this midterm if you put your mind and heart to it! As your professor finishes handing back the exams, you sit back and relax in your seat, reveling in your success.</p>	<p>Today is graduation day. You have spent the past four years devoting your time and effort to your course work and academic pursuits. Dressed in your cap and gown you sit among your fellow students and wait for your name to be called. As the dean reads your name out loud, you rise to your feet and make your way to the stage. Your heart is soaring and you cannot help but stand tall and hold your head high. You shake the dean's hand as you are awarded your diploma as well as the recognition of graduating from your university with honors. All of your hard work and commitment has paid off. You are not the only one who is witness to this recognition. The student body, your friends, your family, your teachers and everyone in attendance are able to see that you have succeeded and surpassed any ordinary expectations.</p>	<p>You are a member of your school's acclaimed track team. There is a big upcoming competition and you have been vigorously training to prepare for competition. When the day of the big meet arrives you are nervous but you are confident in your ability to perform. You take your place at the starting line. Your muscles tense and you focus your attention on the singular goal of completing the race in first place. The gun goes off and signals the start of the race. You fly off your block and sprint down the track. Every inch of your body is working in unison to propel you forward. As you pump your arms and legs, the finish line is fast approaching. You leap over the line and victoriously throw your arms up into the air. Not only have you won the race for your team but you have also broken a personal record! Your hard work has paid off and you have the medals to prove it.</p>

RELIEVED		
1	2	3
<p>One of your family members is missing. Your parents have been trying to contact her for 2 days but they have not received a response. Her closest friends are unsure of her whereabouts and you are growing very worried. The police have been contacted and they claim they are doing everything in their power to locate your loved one. You begin using social media to publicize her name, a physical description and her last known location. You hope someone will come forward with useful information. After five days of constant worry and stress, your family member is discovered! She has not endured any serious injuries. She returns home safely. You go to visit her and you are able to see for yourself that she is alive and well.</p>	<p>Last week you sat for an exam in your least favorite class. Although you tried your best to learn the material, the test was incredibly hard and the possibility of failing has left you with a pit in your stomach. You need to get a decent grade in the course in order to apply to a summer program and you fear that this exam will severely hurt your class average. Your professor is handing back the graded exams in class today and you nervously wait in your seat for her to call out your name. Your palms are sweating and your heart is racing. Your name is called and you make your way to the front of the class. The folded test is placed in your hand. You quickly exit the classroom, take a deep breath and unfold the exam. Your grade is circled in red at the top. You have earned a 91 percent! All of your worries quickly dissipate.</p>	<p>You wake up in the morning after a fun night out with your friends. You started the evening at dinner and then went to listen to live music downtown. By the end of the night you were happy but exhausted and you remember crawling into bed without bothering to check to see if you had all of your valuables. Now that you're awake you realize you should check to make sure you still have your phone and your wallet. You walk downstairs and thankfully, your phone is on the kitchen counter; however, your wallet is nowhere to be found. You search your entire apartment and the clothing you wore the previous night. You are still unable to locate your wallet. You think to call the restaurant your friends and you ate at but the hostess informs you that no wallet had been found. Stressed about the license, credit cards and cash that are now missing, you almost fail to realize your friend is calling your cell phone. You pick up your phone and your friend informs you that he has your wallet!</p>
ROMANTIC LOVE		
1	2	3
<p>You have been dating your significant other for almost a year. Your anniversary is fast approaching and you are wondering what your boyfriend or girlfriend has planned. On the evening of the big day, your significant other arrives at your house with a gift in hand. They bring you to your favorite restaurant. It is the same restaurant where the two of you shared your first date. As you eat by candlelight, they reach across the table to grab your hand and he or she lets you know how much they adore you. This whimsical night carries on as the two of you enjoy a delicious meal and share how much you mean to one another. In the words of your significant other, you are the only person in the world for them because to him or her, you are perfect.</p>	<p>Your significant other has plans to go out with his or her friends. They invite you to come along but you let them know that you would rather stay in. You are pleasantly surprised when they say they will sacrifice their evening out in order to keep you company. While you watch your favorite show on the couch, your significant other prepares dinner. Once the food is ready, they settle down next to you and the two of you enjoy a delicious meal and an entertaining television program. You turn to look at him or her and realize how lucky you are to have someone who proves that you are their priority.</p>	<p>Your significant other is faced with a choice--attend his or her favorite sporting event or spend the evening with you. Although your boyfriend or girlfriend has been looking forward to the game, they know how much this quality time means to you. They choose you. The two of you attend a showing of your favorite movie and end the night at a charming restaurant of your favorite cuisine. After dinner, as the two of you stroll through a local park holding hands, they turn to you and let you know that it is hard to imagine their life before you or a day without you. Today was just a single example of the sacrifices he or she is willing to make for you. You are the force that holds their life together. You are the center of their universe. You are their everything.</p>

SCHADENFREUDE		
1	2	3
<p>You are on your way to an important interview. In hopes of getting to the location as quickly as possible you hop on the highway and remain in the left hand lane. After ten minutes of driving you hear the roaring of an engine. A speeding car is fast approaching. You try to concentrate on the road and the cars in front of you but before you know it, the careless driver completely cuts you off! You are forced to abruptly break to prevent slamming into the back of his car. You are flustered and annoyed as you watch the out of control car speed away into the distance. You carry on driving but five minutes later you notice the same speeding car pulled over in the emergency lane. He has been stopped by a cop and is receiving a speeding ticket! You grin and spend the rest of the ride basking in the fact that he got caught for his misbehavior.</p>	<p>At school there is a group of friends who enjoy picking on people. They are not particular about who they bully and today they have targeted a scrawny boy in your grade. You eye them from across the cafeteria as they approach him. He seems uncomfortable and you sympathize with your classmate because you know he is about to be victimized. The leader of the group is particularly vicious. You watch as she spews cruel remarks and points out his shortcomings. After they tire of bullying the boy, the group leader begins walking away, leaving the intimidated student behind. With her head held high, she only takes a couple of steps before catching the leg of a cafeteria chair. She trips and falls face-first onto the floor. Her fellow bullies that had been walking behind her are unable to react quickly enough; so they trip over their fallen friend. Everyone in the cafeteria is witness to this incident. You burst into a fit of laughter.</p>	<p>There is an upcoming event that you plan on attending with your significant other. Unfortunately, a couple of days before the event, the two of you are not seeing eye-to-eye. Ultimately, you get into a relationship-ending argument. You are not sad; rather, you are disappointed by your ex's selfish and unyielding attitude. You do not spend time sulking. Instead, you find a new date to the party and you are confident that the two of you will have an incredible night together. On the day of the event, you ask around to see if your ex has found someone to bring. You are told that everyone is already paired up and your ex will be left date-less. Your ex will either have to go alone or miss out on the event entirely. Although you would normally sympathize with someone facing this misfortune, you believe justice has been served. Your ex deserves to be left dateless.</p>
SURPRISED		
1	2	3
<p>The year is 2012. You have just arrived in France for a brief vacation. You have spent your days taking in the iconic sights and enjoying Italian delicacies. So far, your trip has been enjoyable but you haven't experienced anything out of the ordinary. Tonight, you have decided to stay in and rest. You begin your walk back to the hotel. As you near your final destination, your attention is drawn to a handsome couple in an old fashioned car. They appear to be lost and they ask you for directions. After trying to help the two travelers, you engage in pleasant conversation that ends with the couple inviting you to enjoy a night out with them. You abandon your plans for an early night in and hop in the car with your new friends. The three of you finally reach your destination—an old building filled with a lot of people. As you nod your head to a Louis Armstrong tune, you strike up a conversation with a young man with dark hair holding a glass of rum. As he goes on about his recent trip to the running of the bulls and his upcoming novel, "The Sun Also Rises," you realize that you are no longer in the 21st century. Somehow, you have been transported back in time. You are attending a party in the 1920s and your new friend is Ernest Hemmingway!</p>	<p>You are sitting at home on the couch watching a movie. This particular movie stars your favorite actor. As the storyline progresses you watch him perform daring stunts and deliver witty lines. As the closing credits roll, you receive a phone call from your best friend. The two of you have dinner plans and he is on his way. You call your favorite takeout restaurant and place an order for delivery; then, you wait for the food and your friend to arrive. A couple minutes later your doorbell rings. Assuming it is either the delivery driver or your friend, you do not look through the peephole; instead, you open the door. You scream. Standing next to your best friend is your favorite actor! He shakes your hand and says hello. Your friend informs you that they share a mutual friend and that this meeting is your birthday present. You had no idea! You invite both of them inside. As you step back into your house, you realize you are about to eat dinner with your favorite actor! You are speechless.</p>	<p>After college, you were given an exciting job offer. You accept the offer because the job is related to your major and you know that you can quickly move up in the company. The only problem with this ideal situation is that the job is located 2,000 miles away from your hometown. All of your close friends and family will be living and working far away from you and getting home to visit will require a plane ride or a long car ride. Soon after accepting the offer you have to say goodbye to your loved ones and move across the country. After a week of packing and unpacking, you are finally settled in your new apartment. By the time you are all moved in, it is your birthday but unfortunately, it is your first day of work and you are unable to go home to celebrate. After a long but productive day at work, you ride the elevator back up to your apartment. You unlock the door, step into the foyer and turn on the lights. You jump back as your friends and family members spring up from behind the furniture in your living room! There are presents, a cake and dozens of balloons. Unbeknownst to you, your loved ones flew in to throw you a birthday party!</p>

Study 1 RedCap Survey

Vignettes Group 2

Resize font:


Please read each of the six vignettes. After reading a vignette please complete the subsequent rating of your emotions using the Discrete Emotion Adjective List (DEAL).

Thank you!

Please read the following six vignettes. After reading a vignette, focus on the feelings you are personally experiencing and indicate them using the Discrete Emotion Adjective List (DEAL). The DEAL includes 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. Your answers in this survey will aid in our experiment aimed at finding the best vignettes for inducing discrete positive emotions. There are no right/wrong answers.

As a recent graduate of a high-ranking university, you are currently on the hunt for a fulfilling job. You have scored an interview with an impressive company. On the day of the interview you arrive at the office feeling prepared, confident and overall excited to let the interviewer know how qualified you are for the position. As the interview comes to a close, the employer let's you know that they were very impressed with both your resume and the way in which you presented yourself. Upon leaving the office, the interviewer shakes your hand, smiles and let's you know that you should expect to hear good news from their office in a couple of days. You are filled with excitement and you leave the office with high expectations.

1) **Inspired -- Invigorated -- Marveled**

1 (does not characterize my feelings at all)

2

3

4

5 (characterizes my feelings somewhat)

6

7

8

9 (characterizes my feelings extremely well)

[reset](#)

2) **Surprised -- Astonished**

1 (does not characterize my feelings at all)

2

3

4

5 (characterizes my feelings somewhat)

6

7

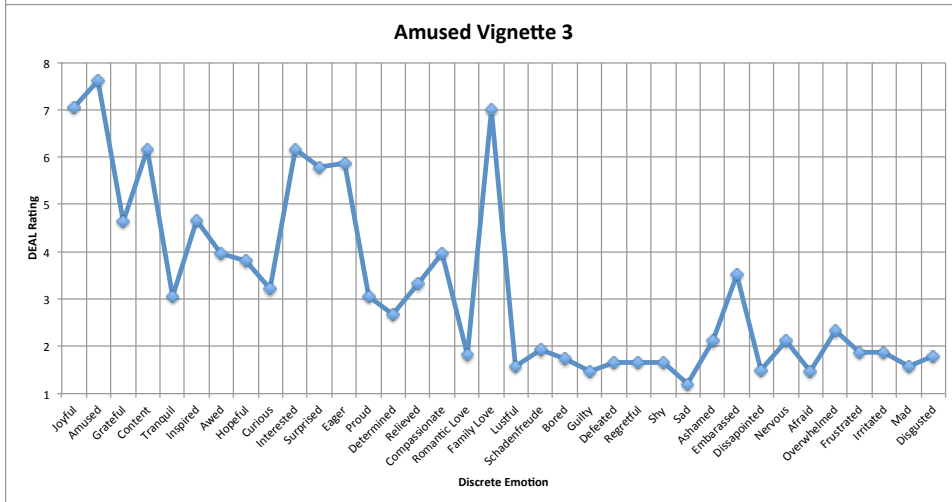
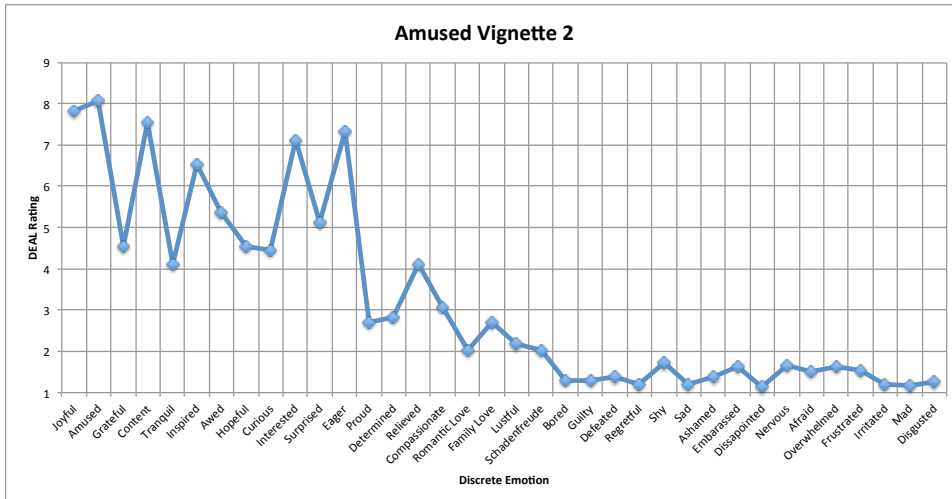
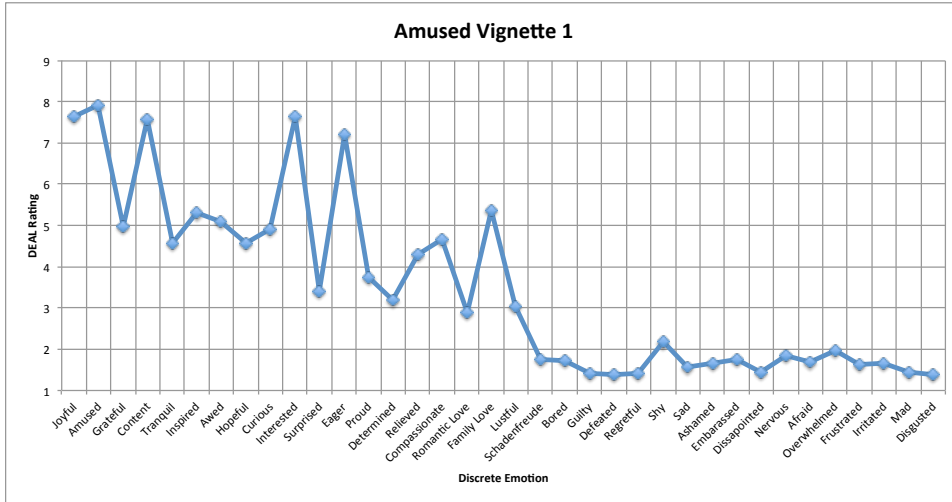
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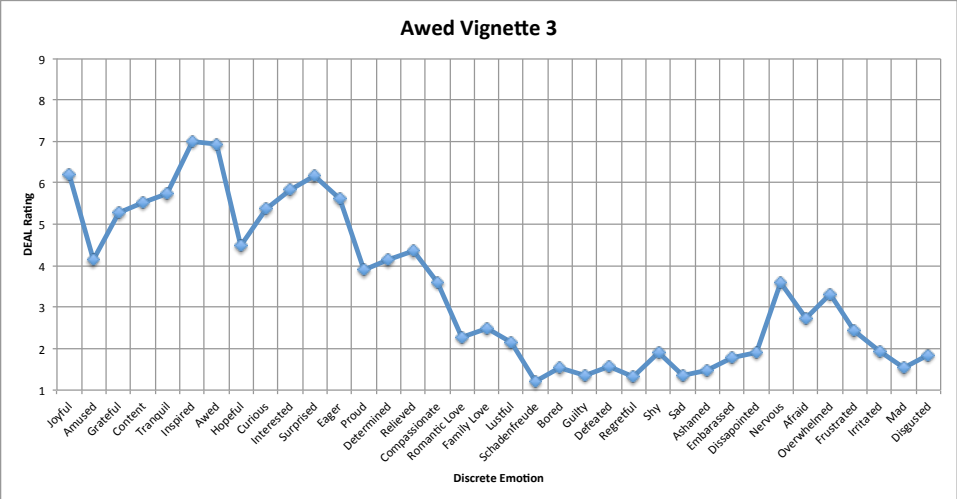
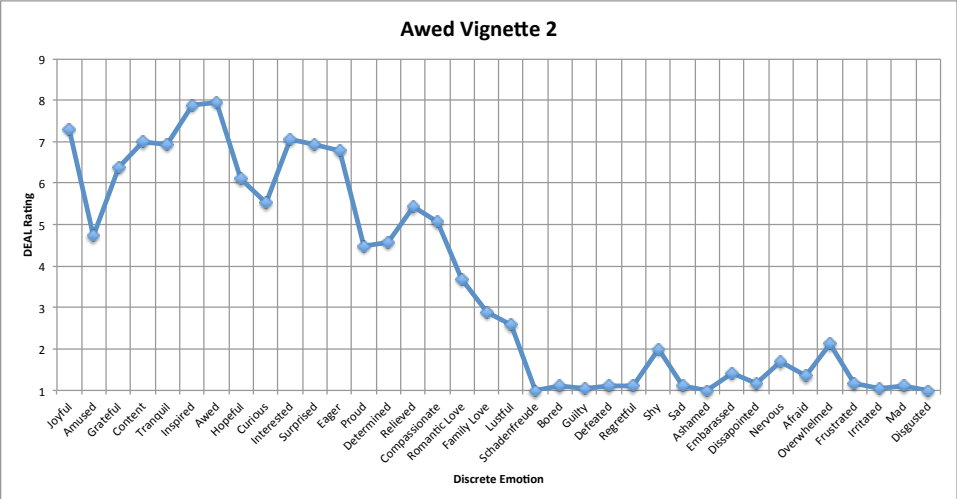
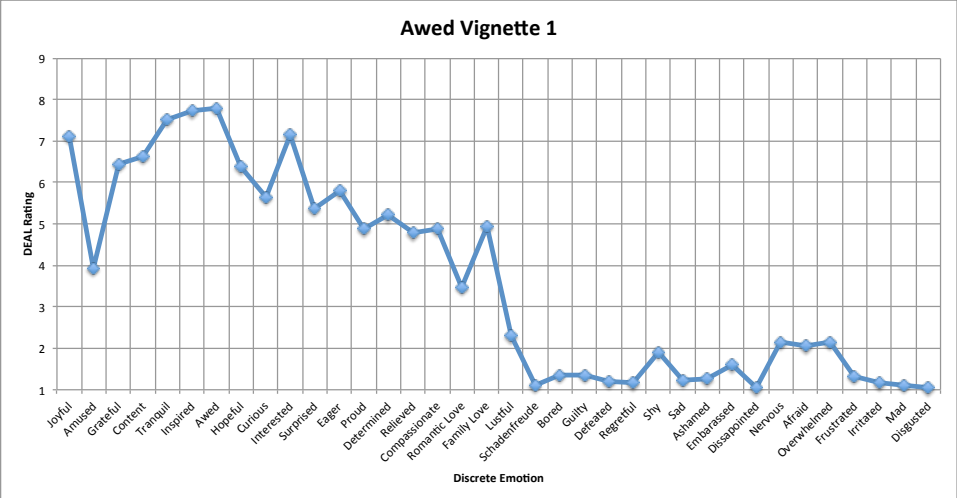
9 (characterizes my feelings extremely well)

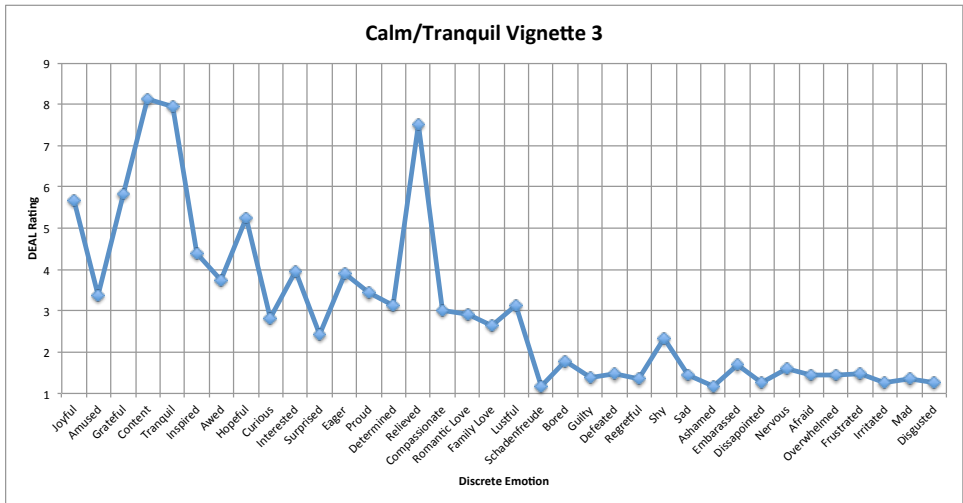
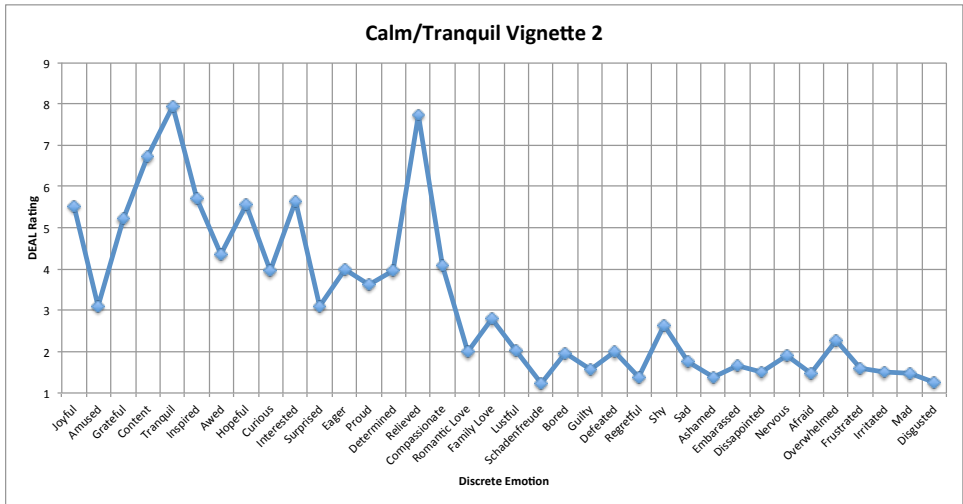
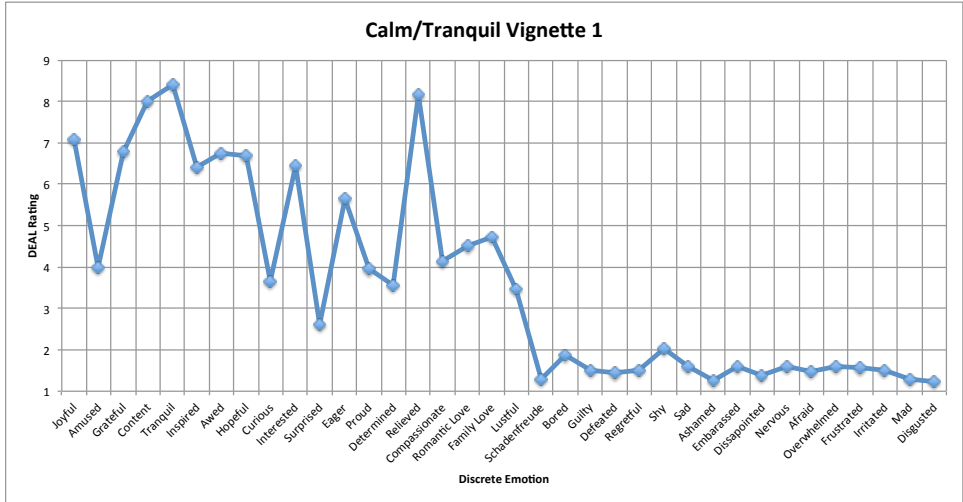
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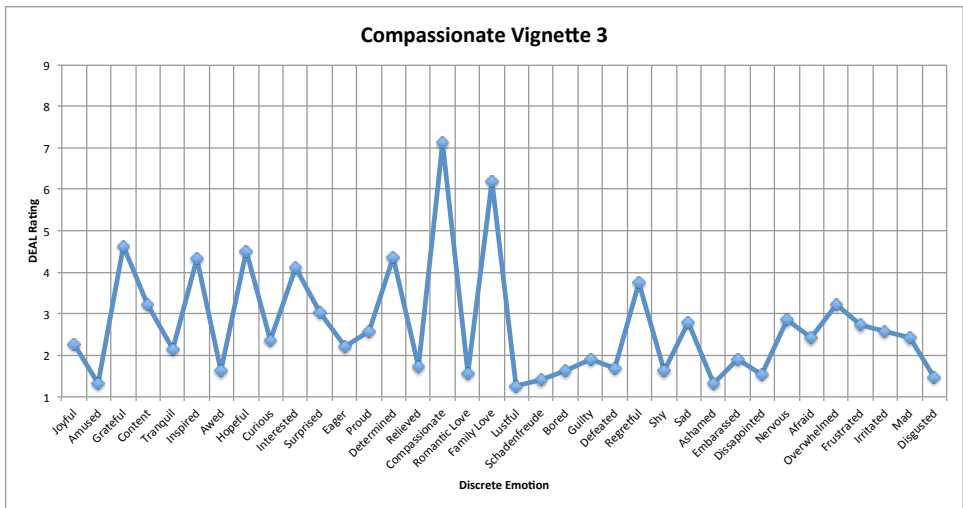
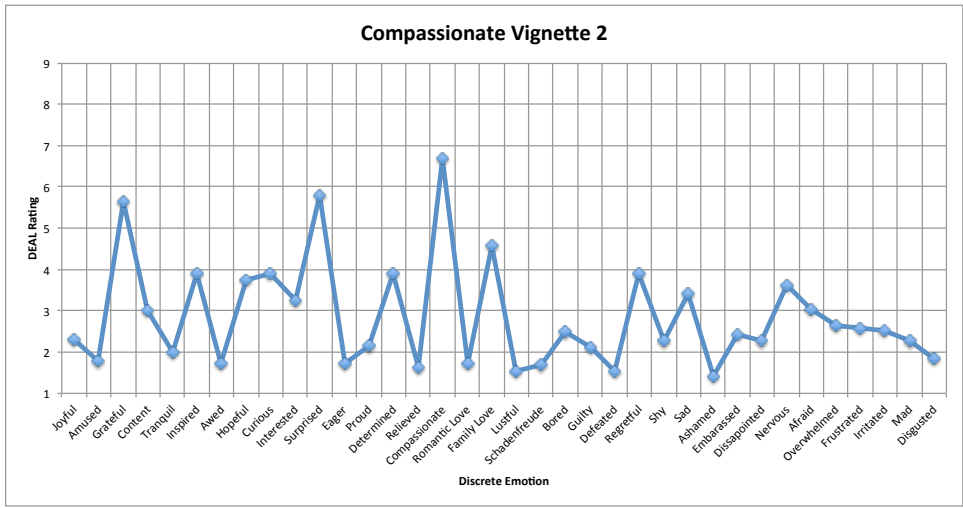
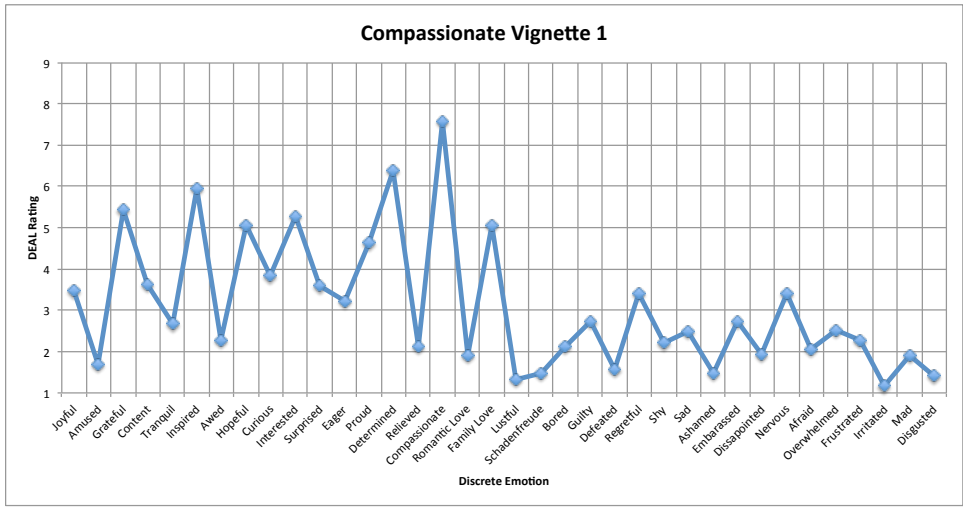
Note. The DEAL emotions ratings continue for all 36 positive and negative emotions. The measure is presented after each of the six vignettes presented in a survey.

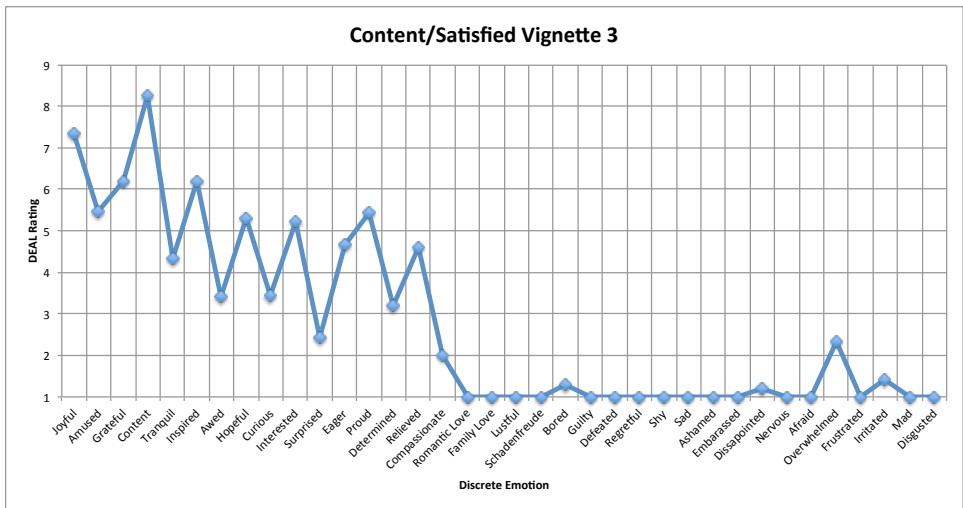
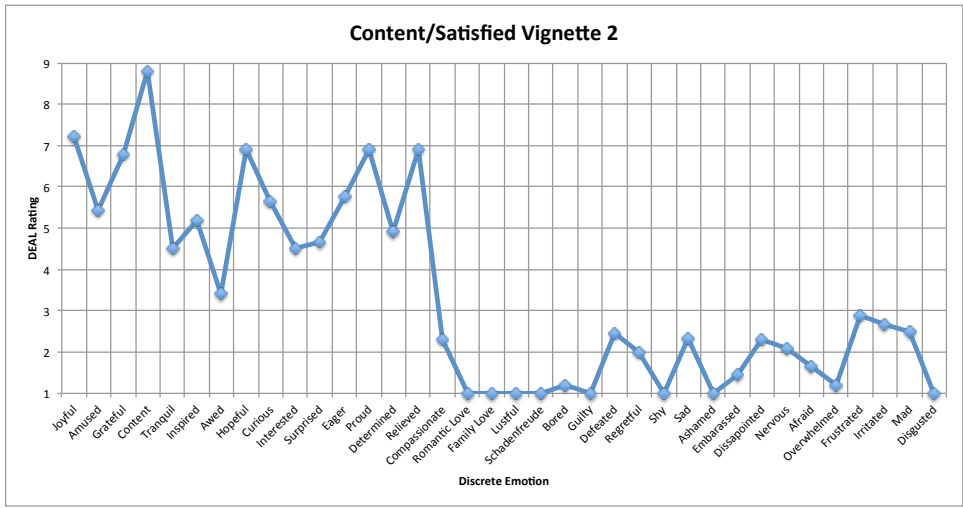
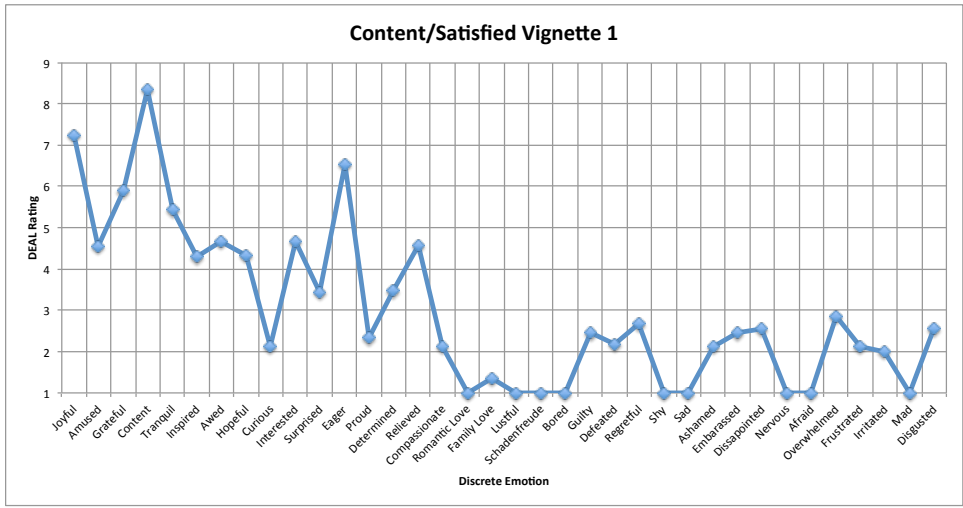
Study 1 Average Emotion Means for Vignettes

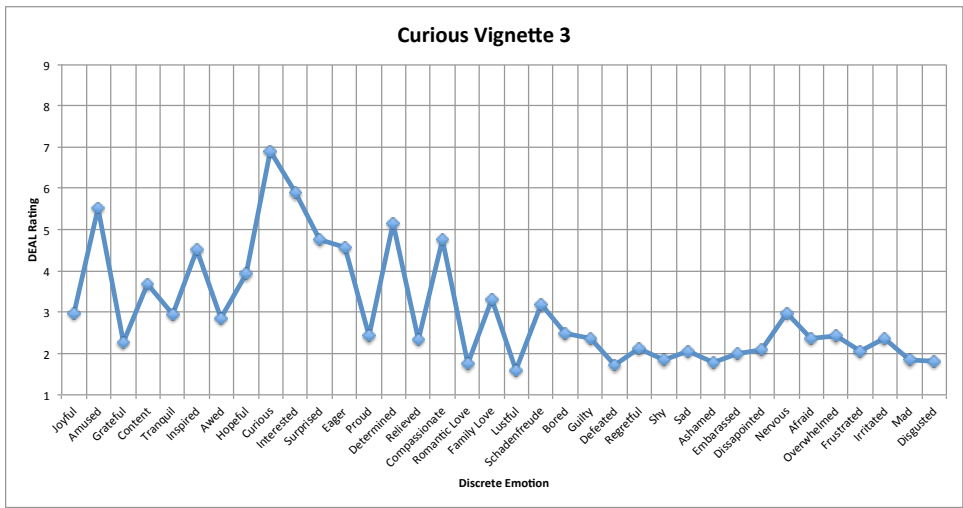
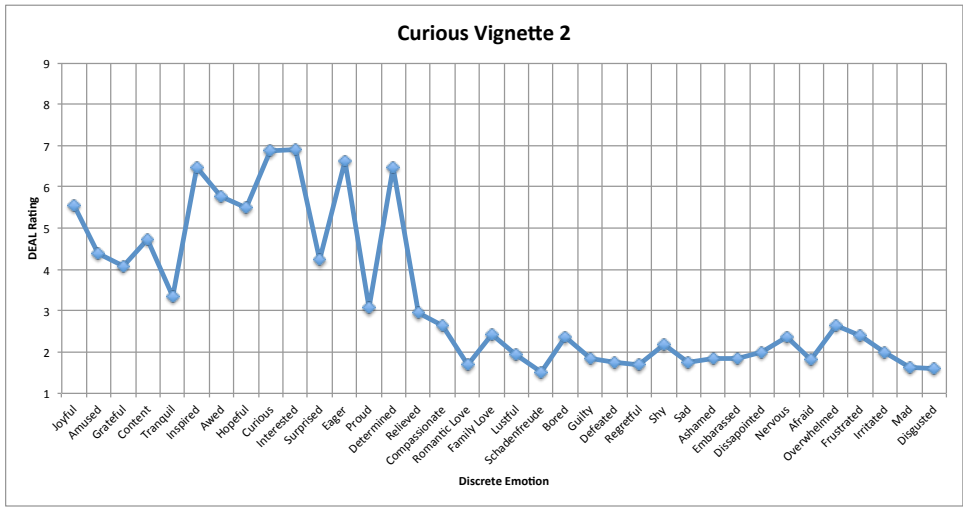
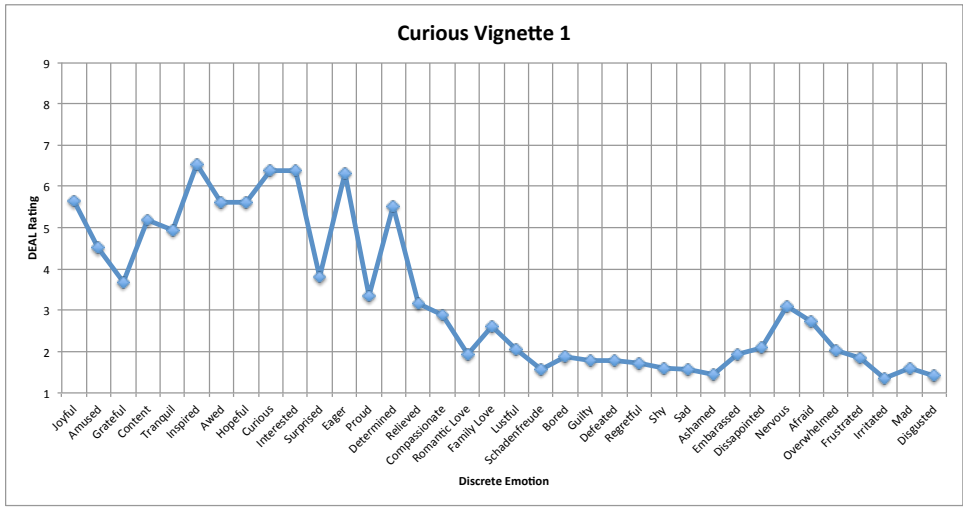


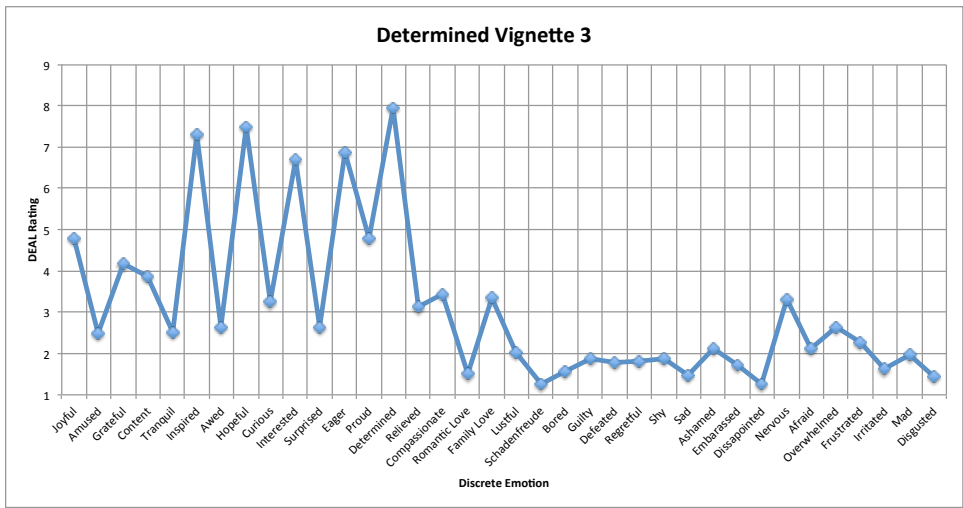
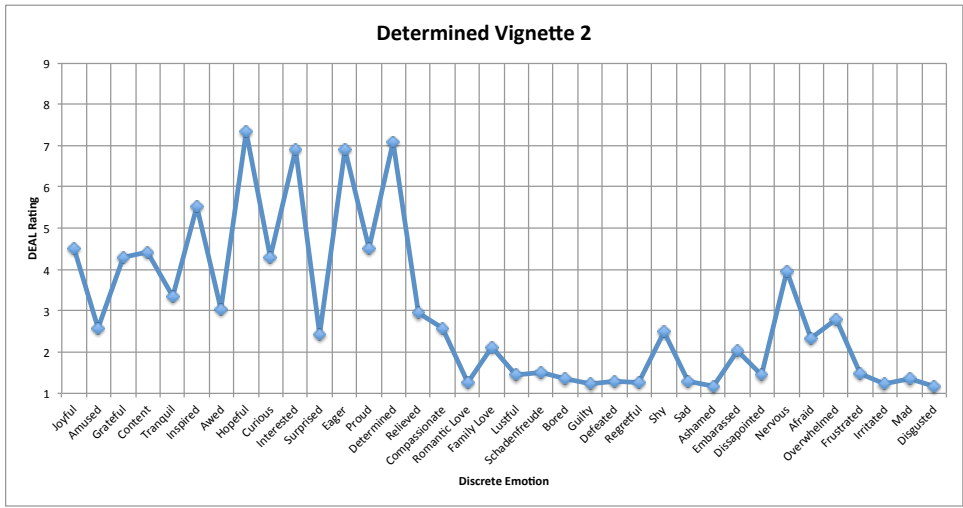
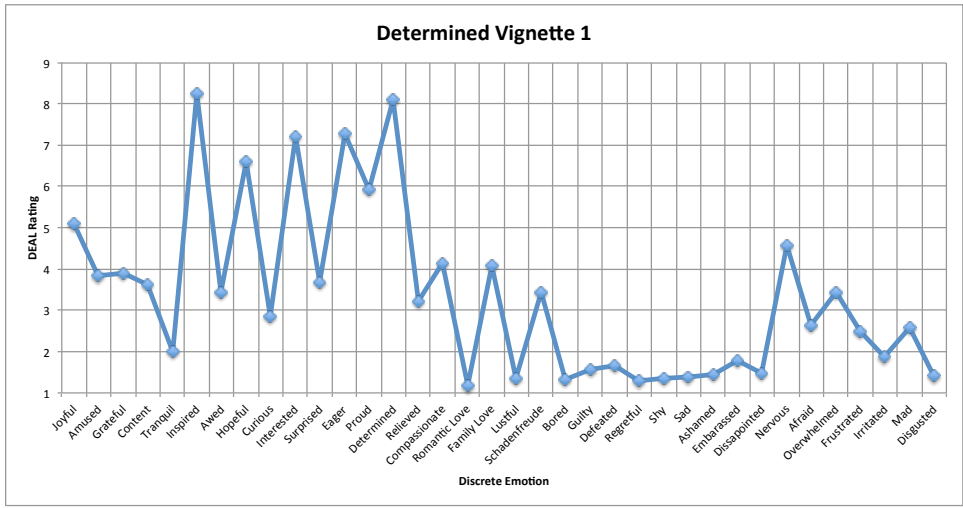


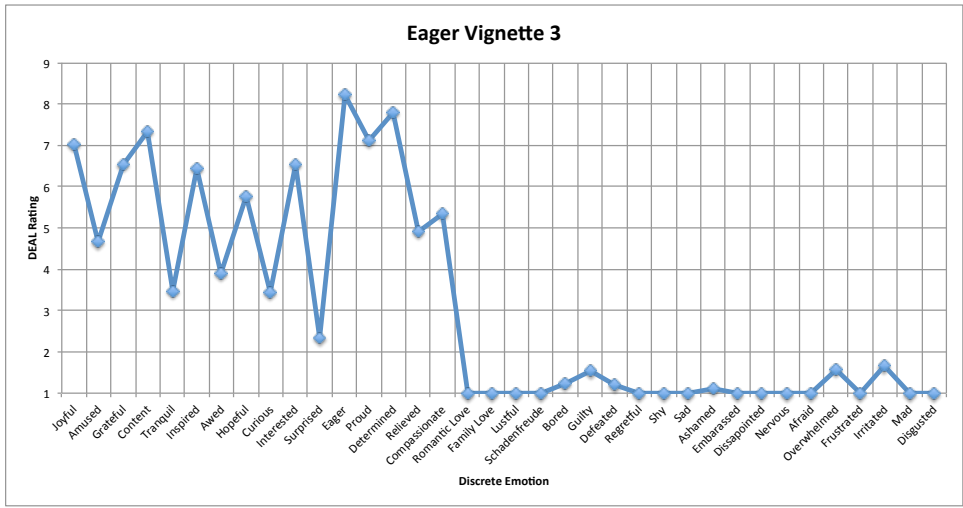
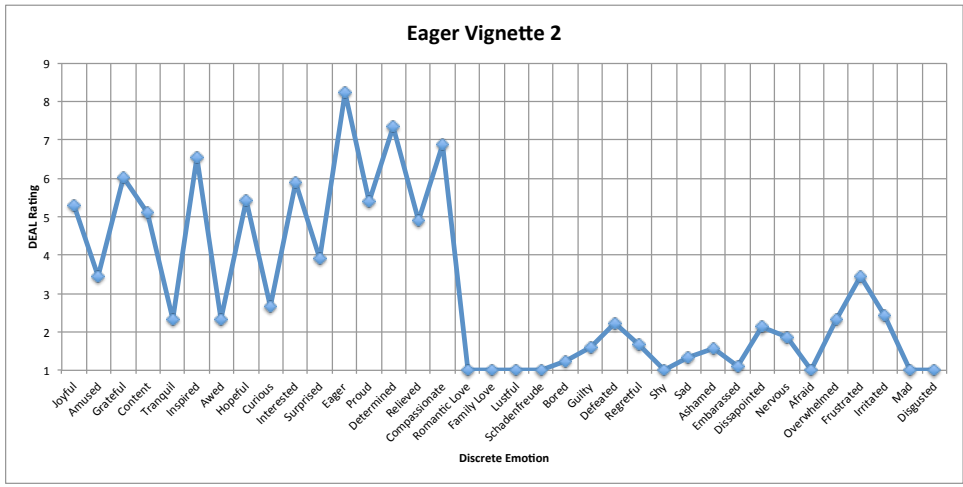
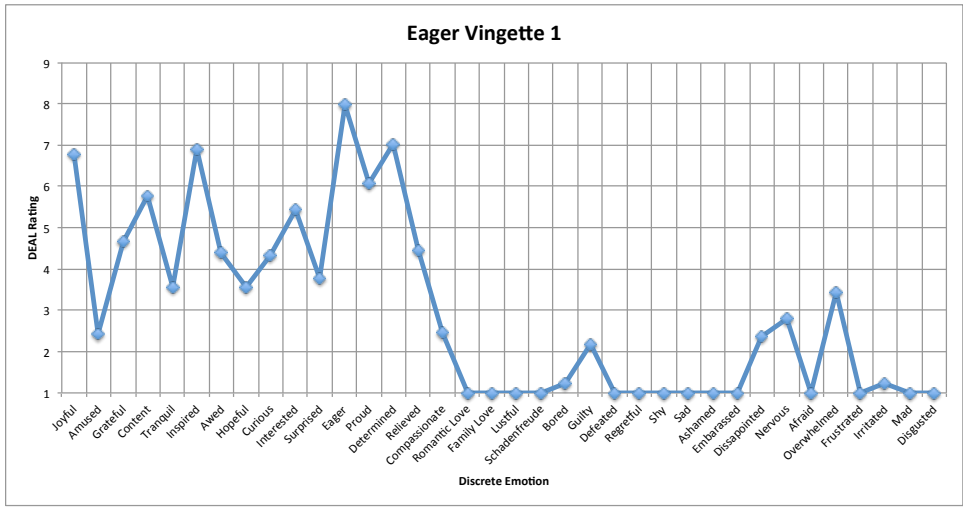


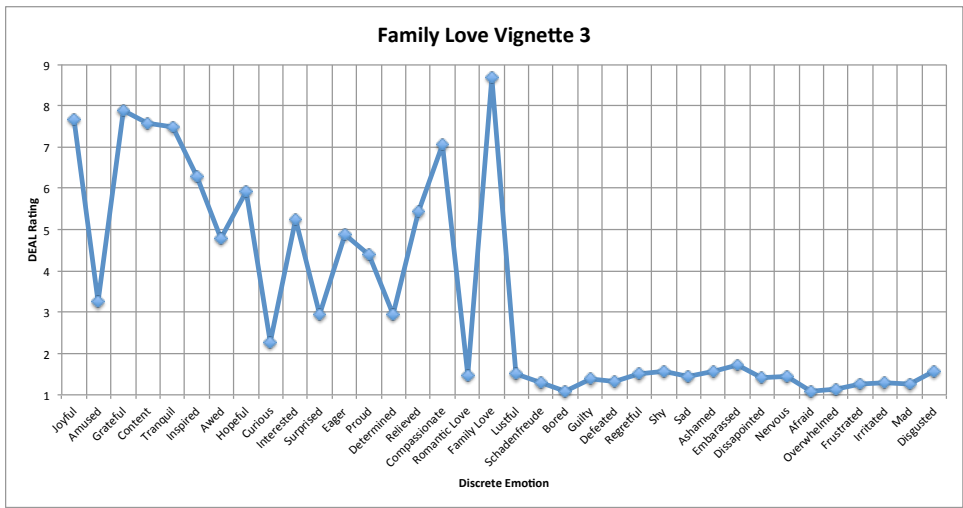
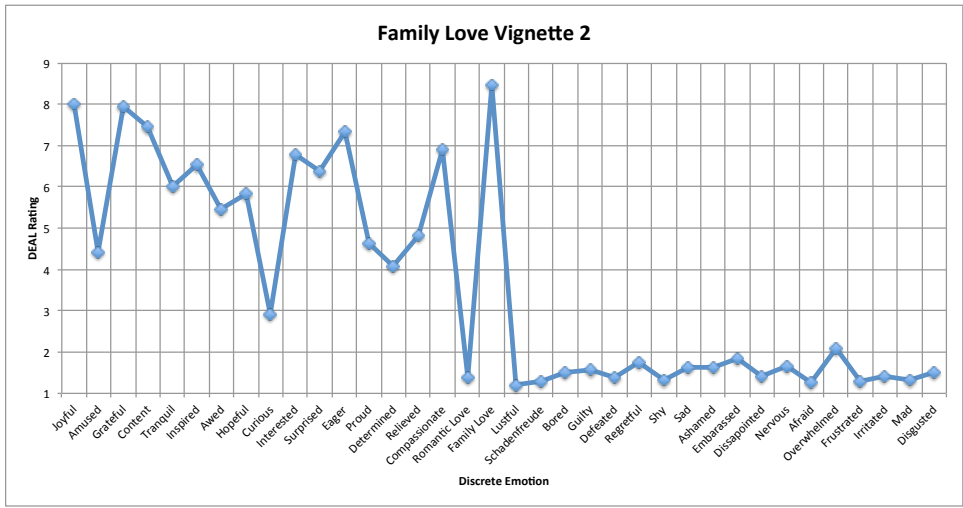
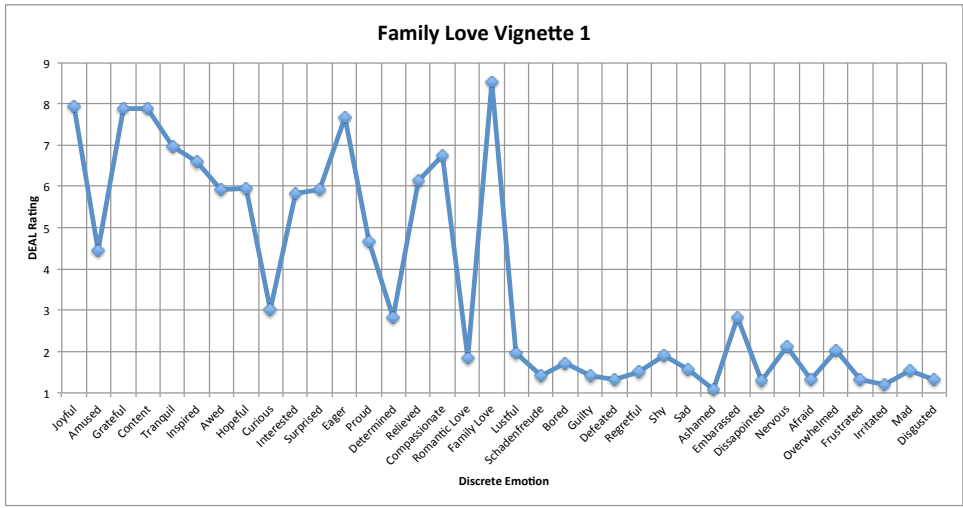


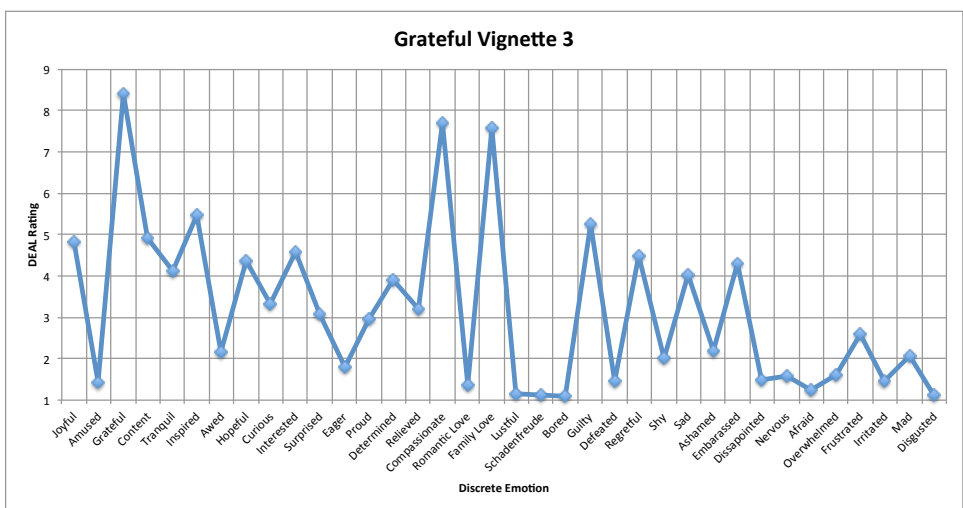
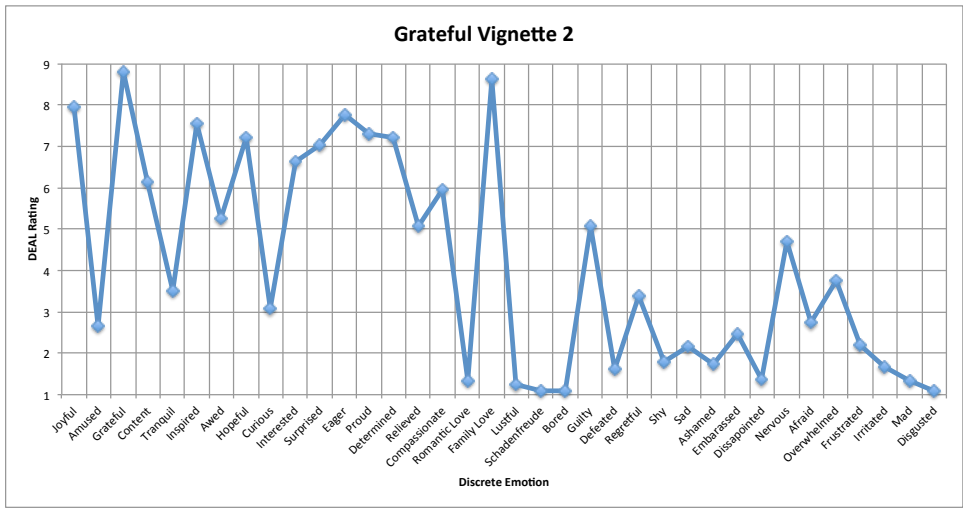
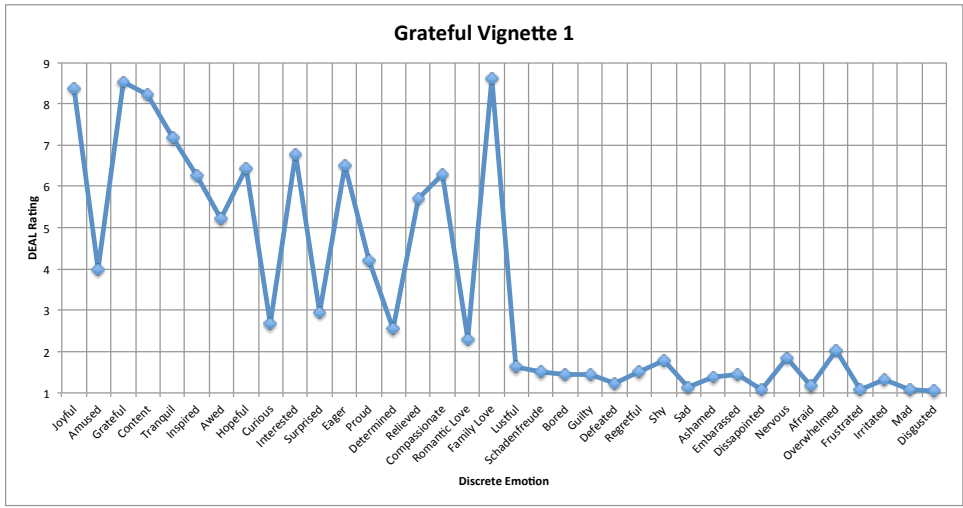


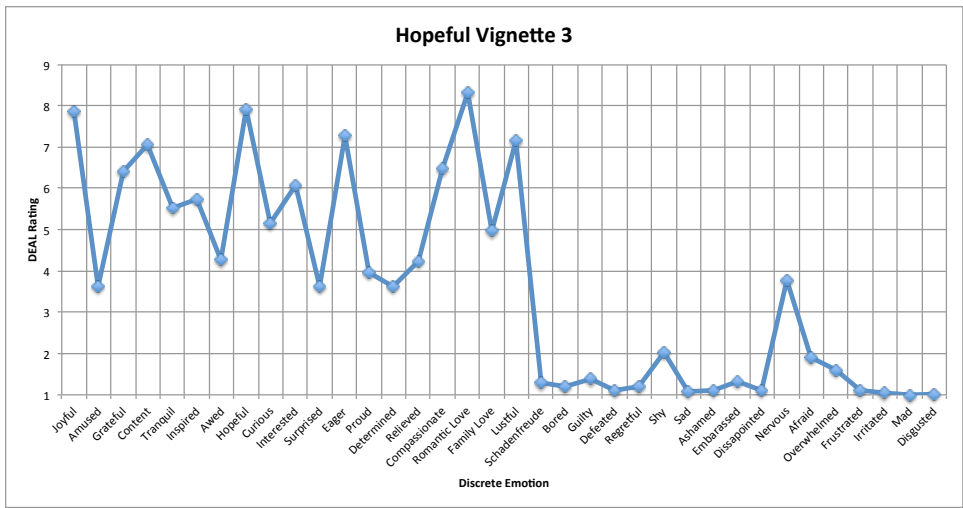
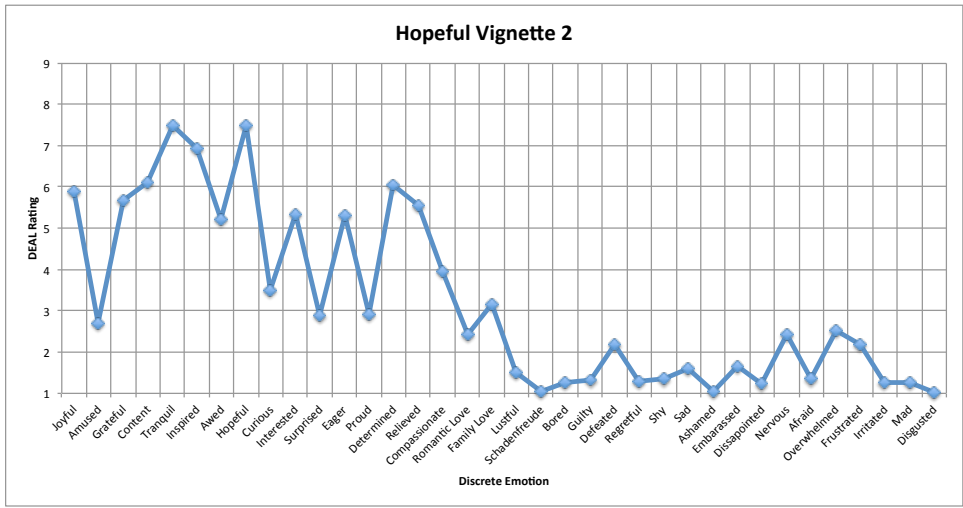
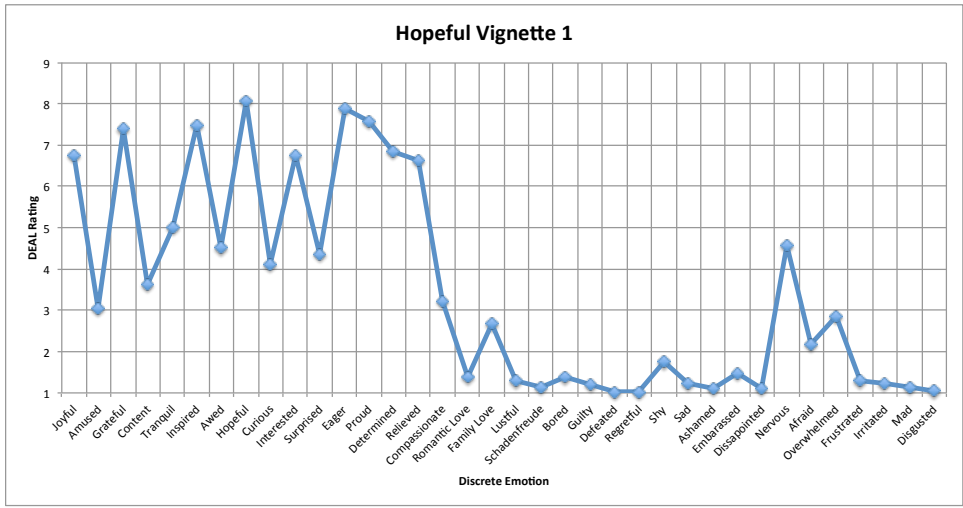


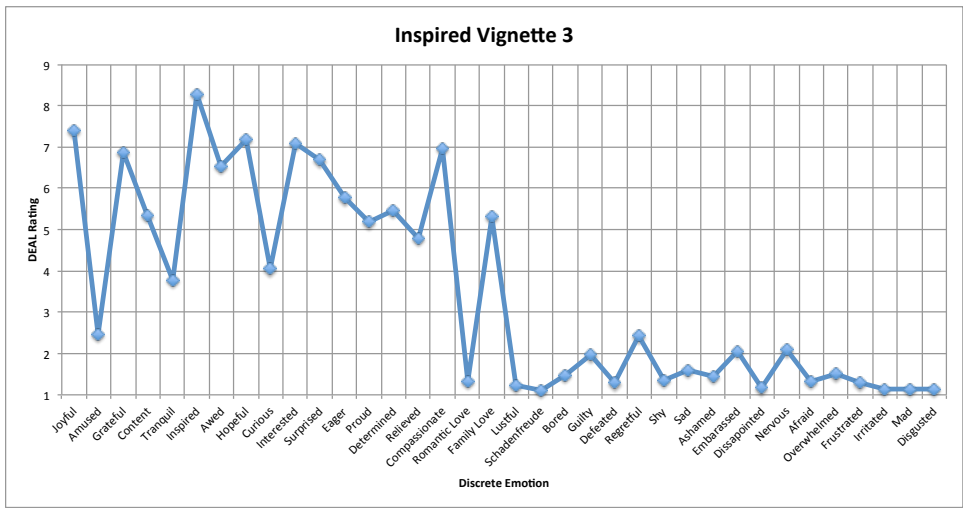
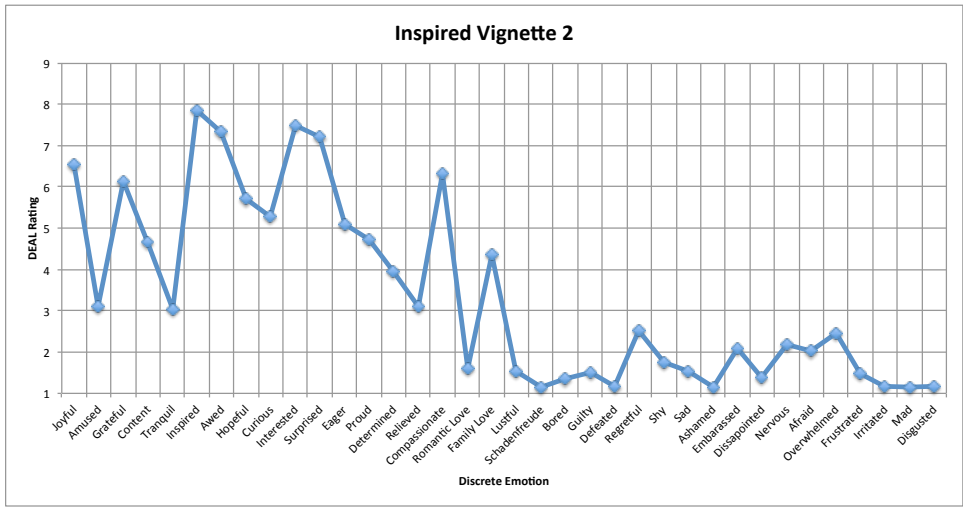
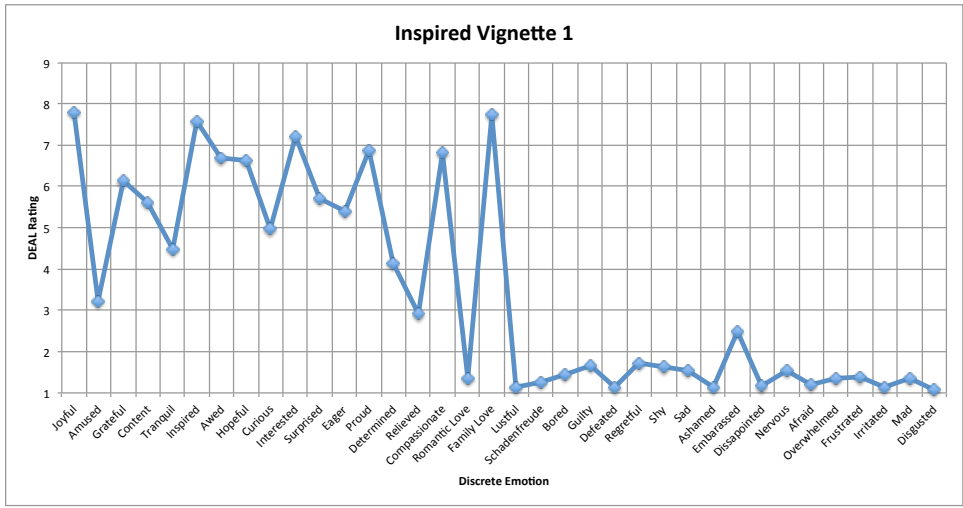


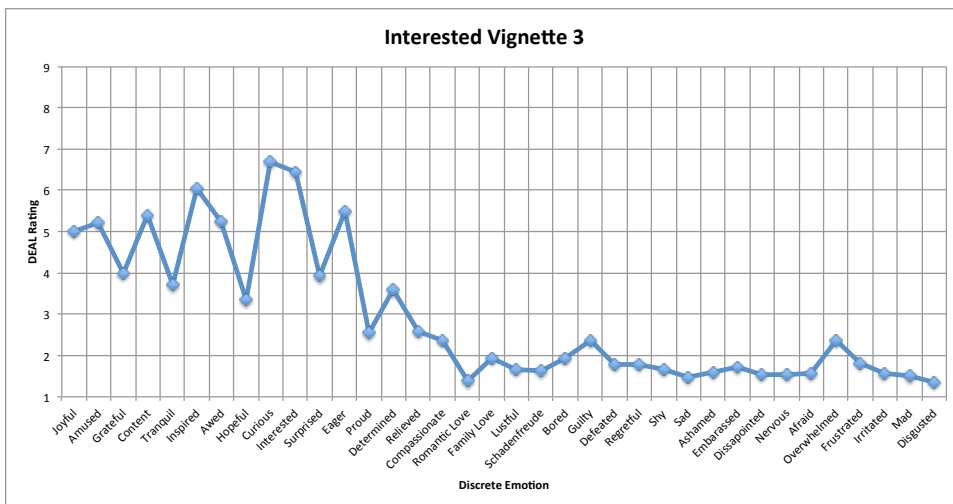
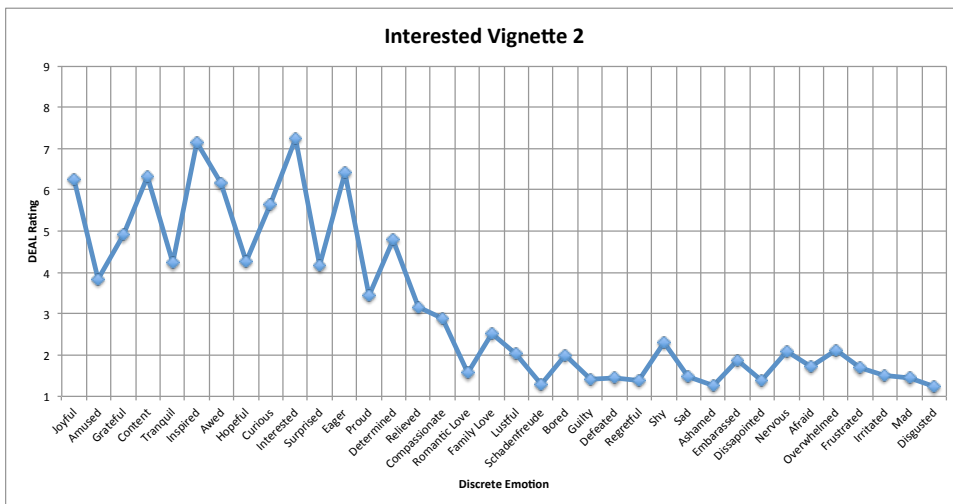
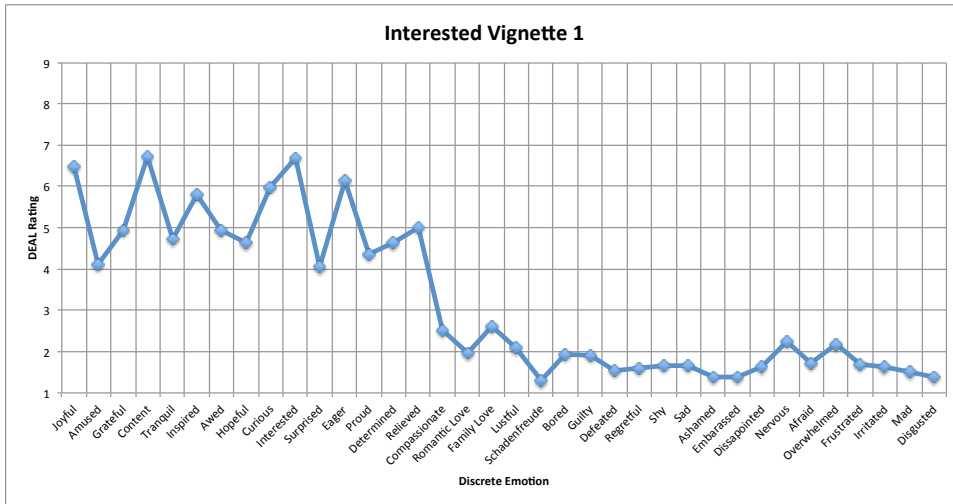


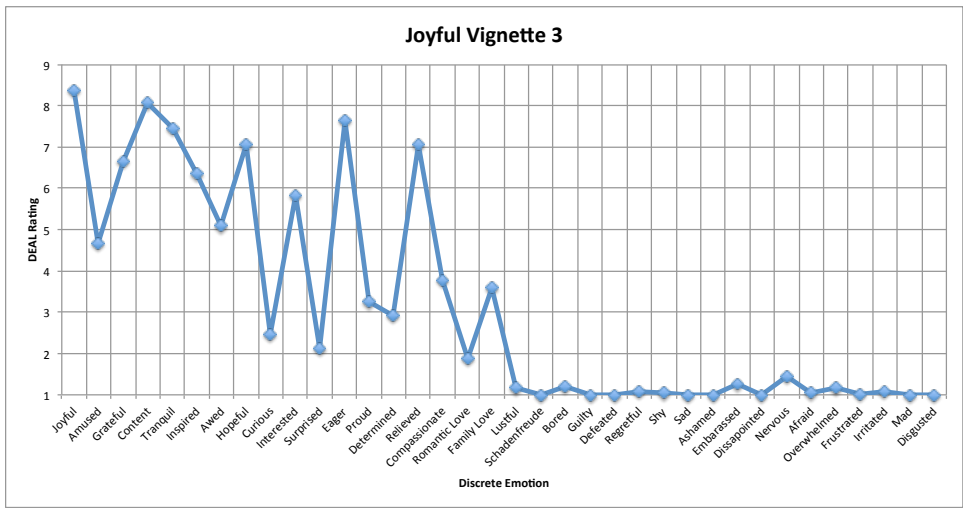
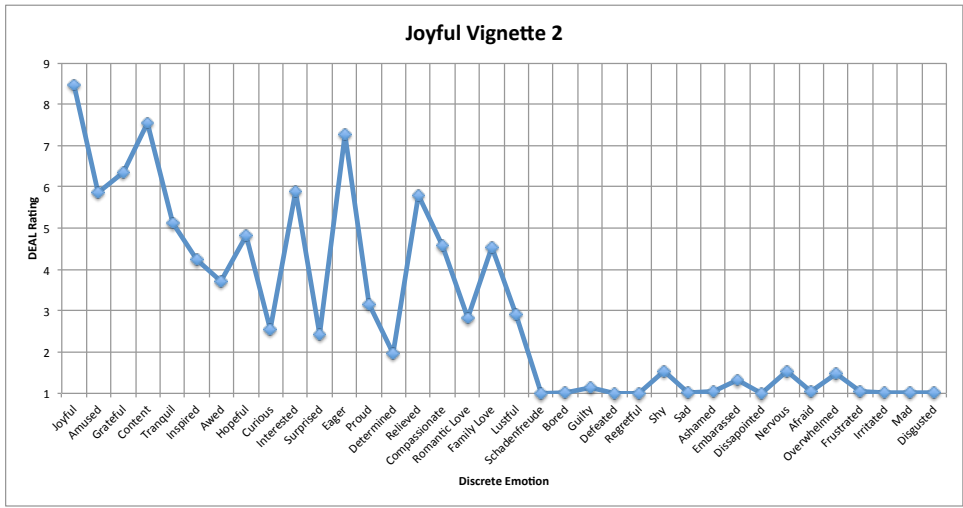
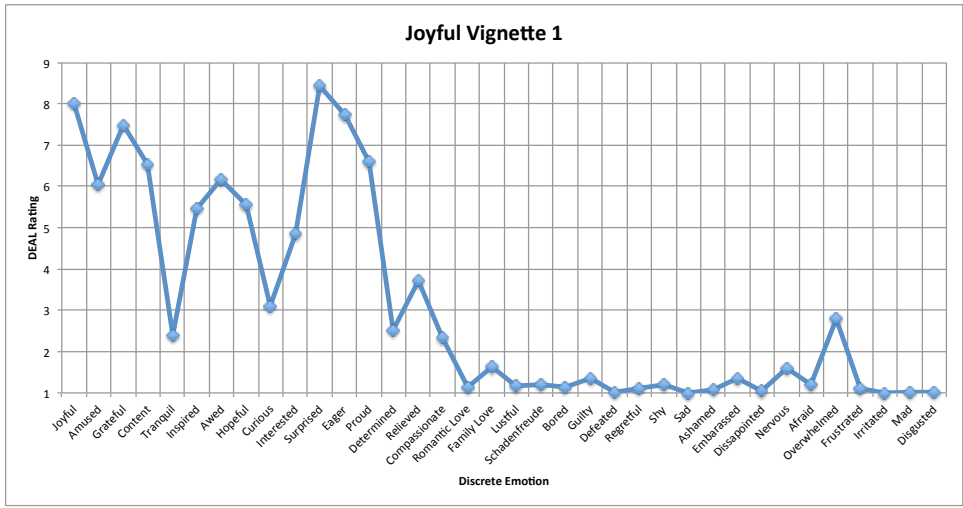


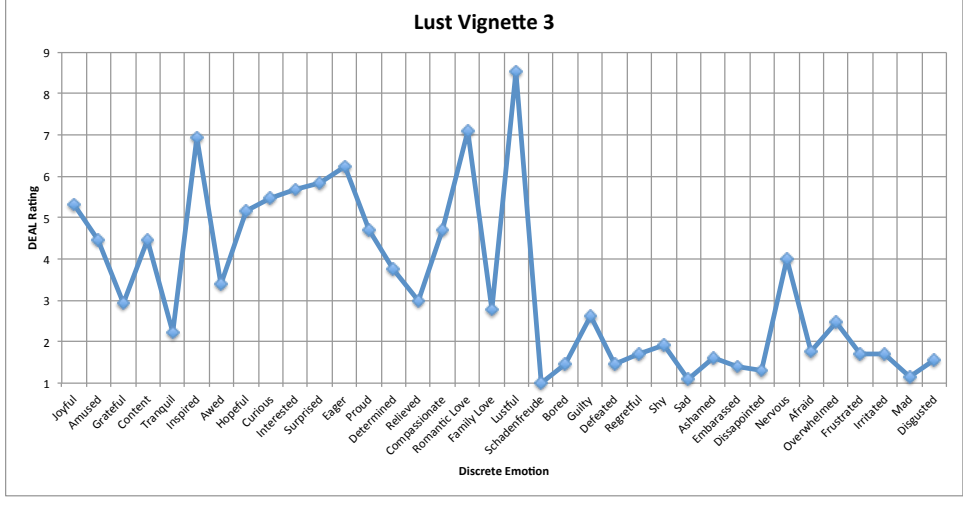
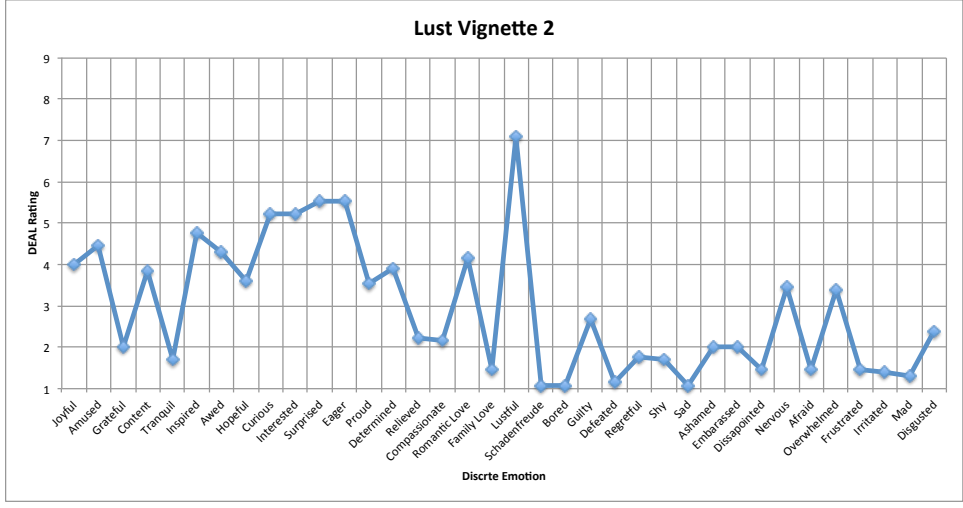
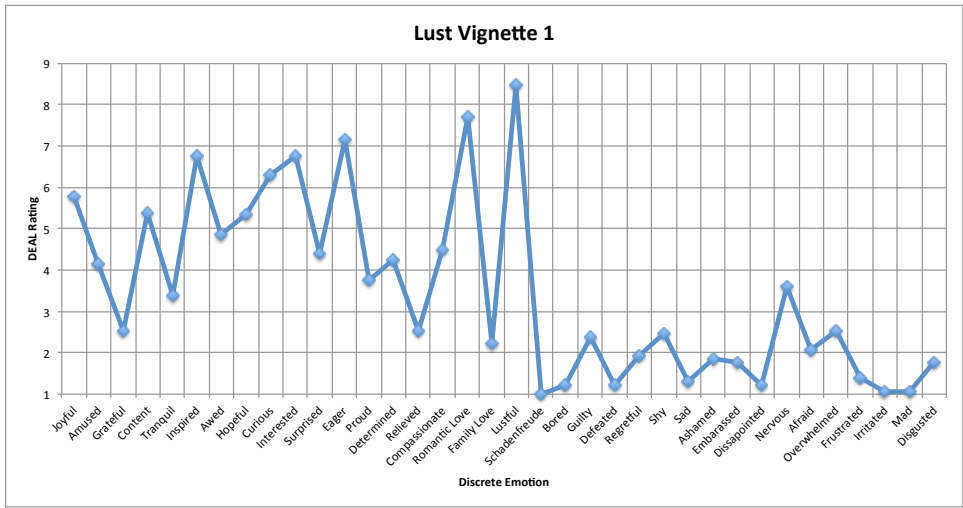


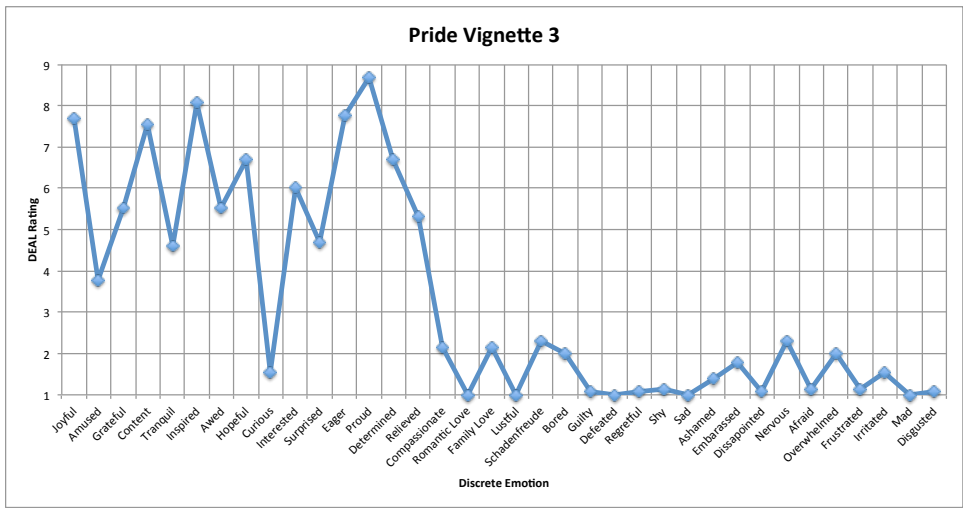
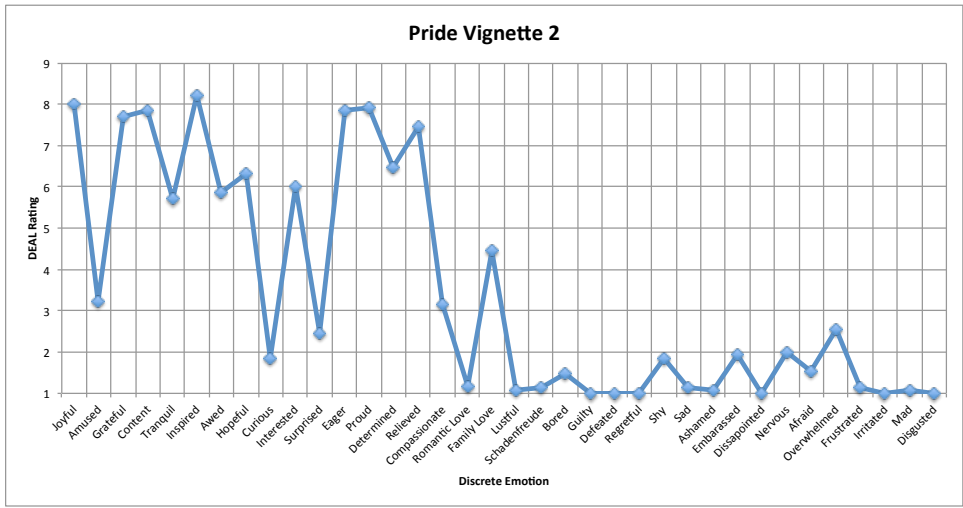
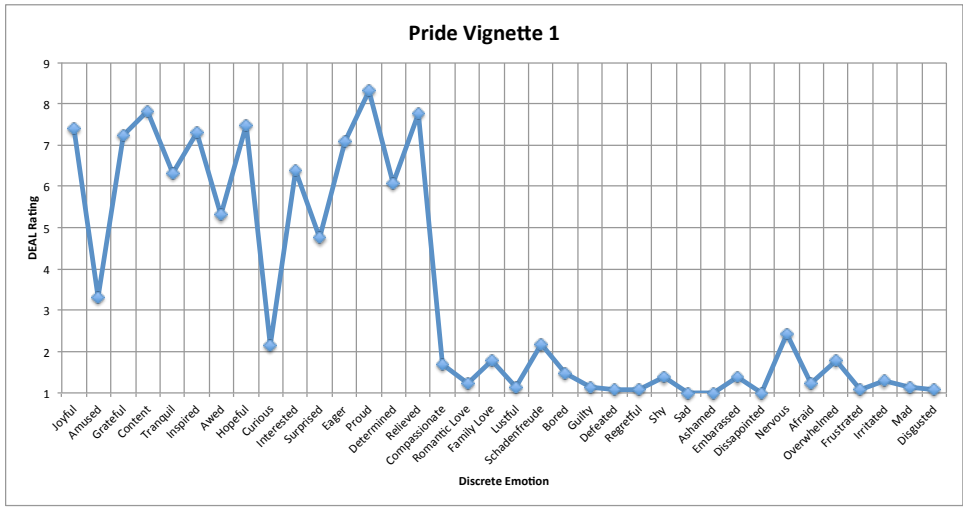


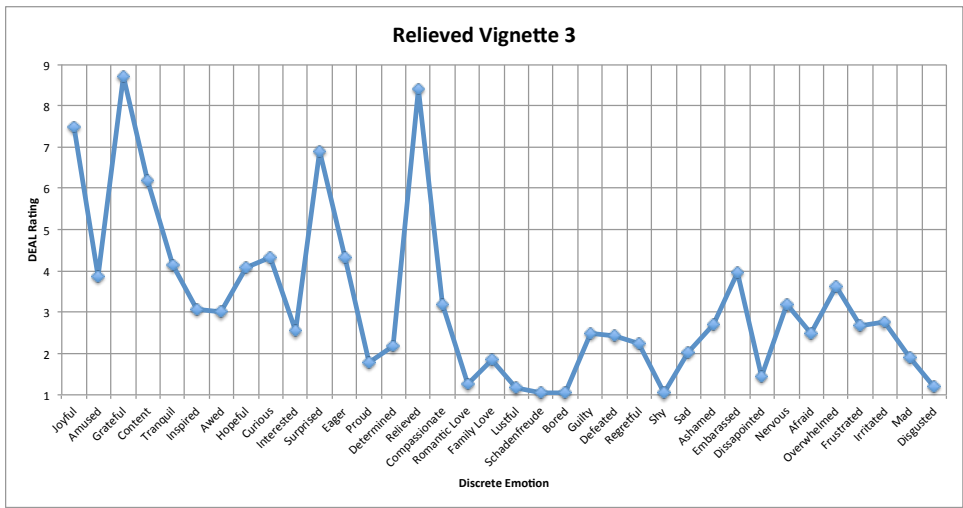
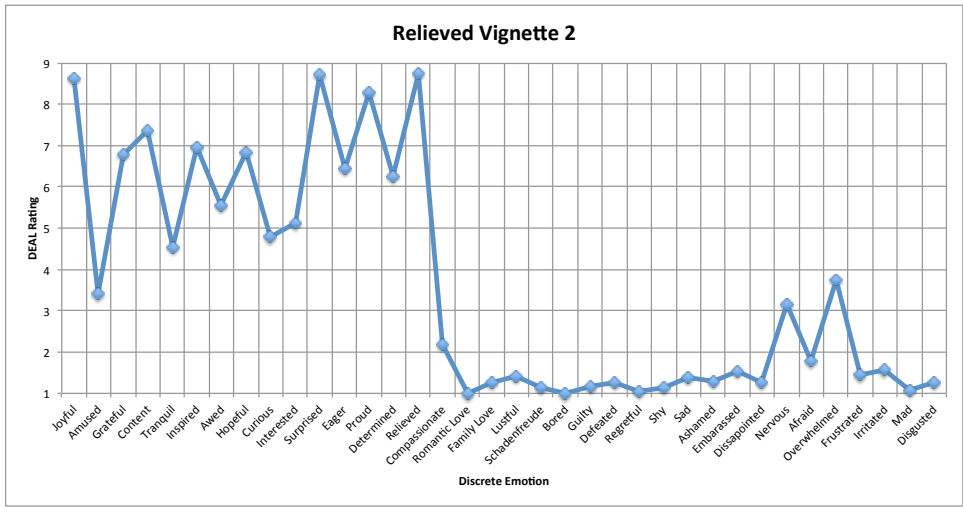
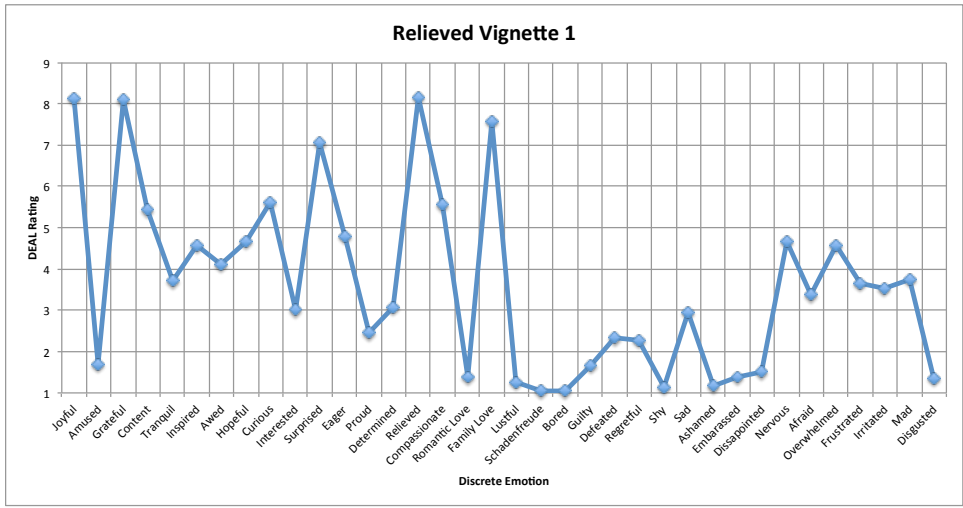


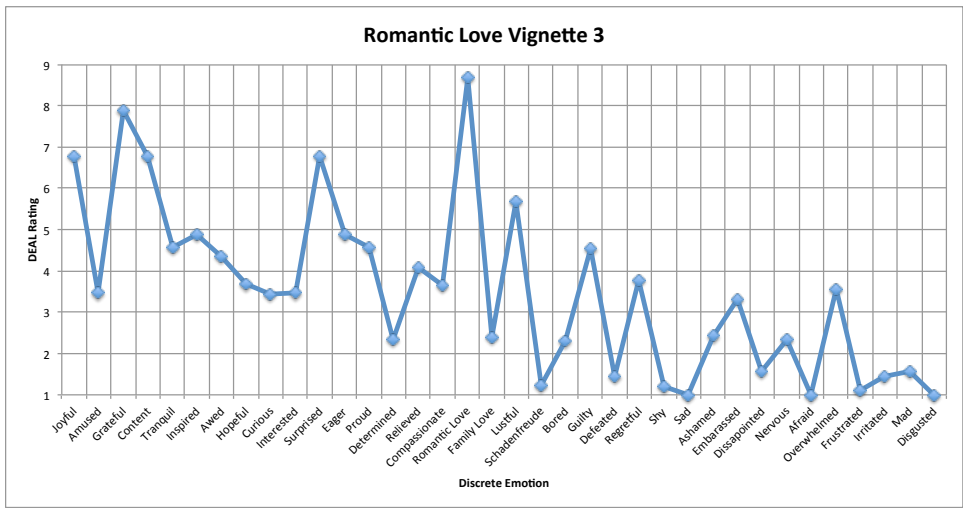
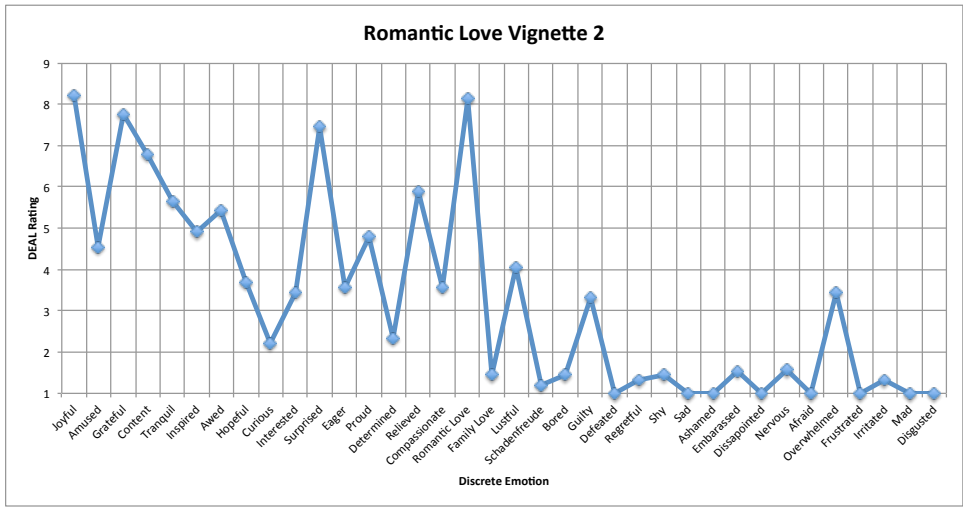
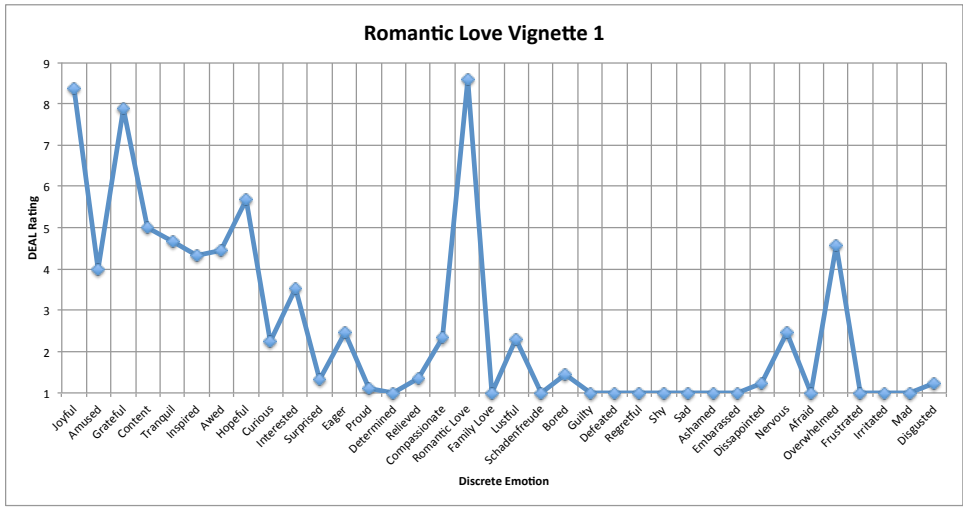


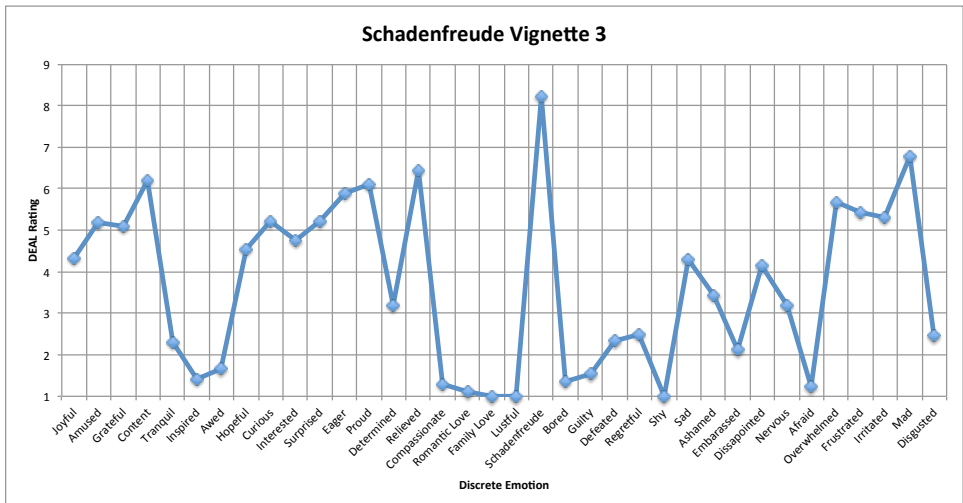
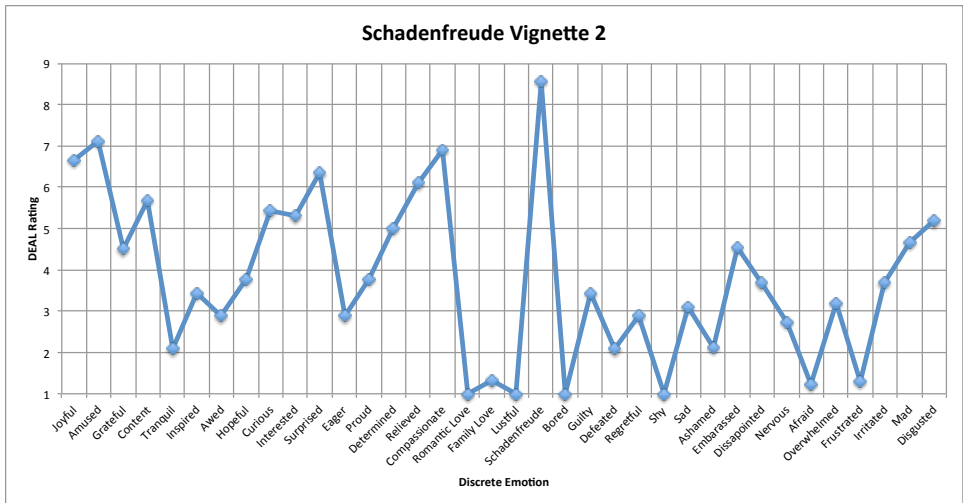
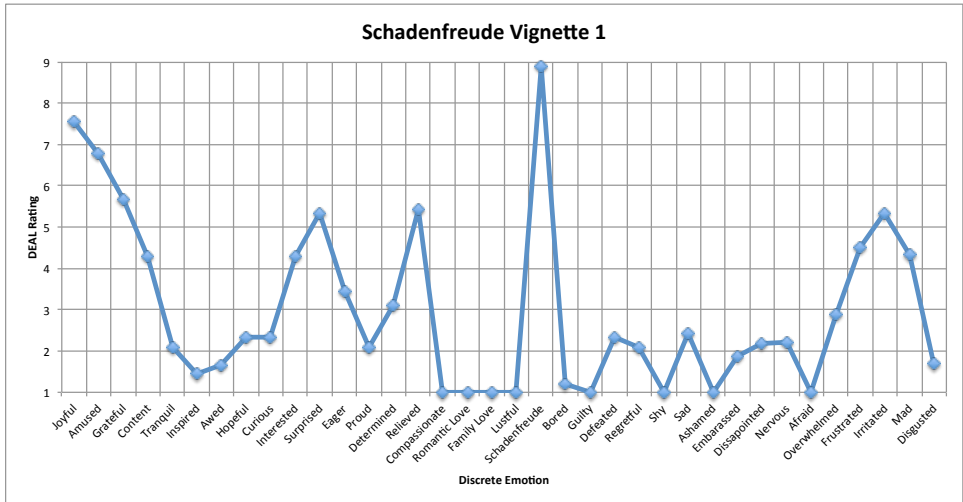


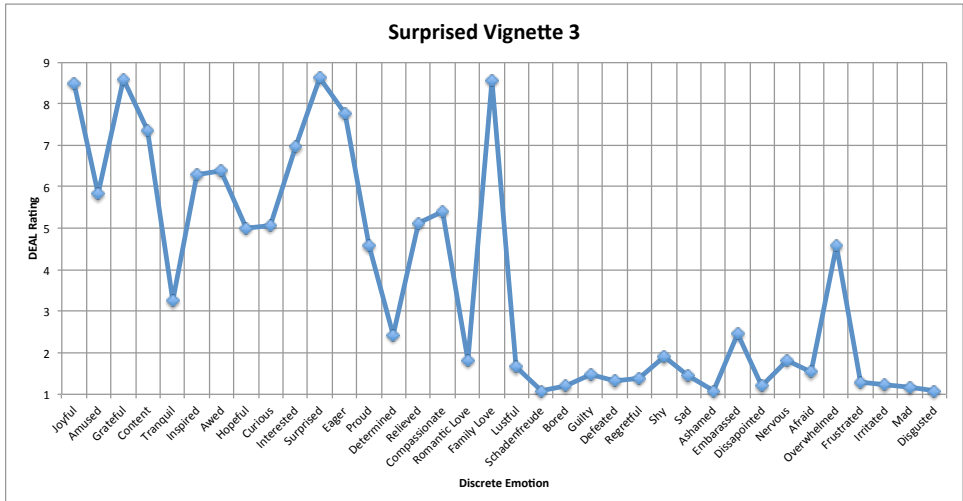
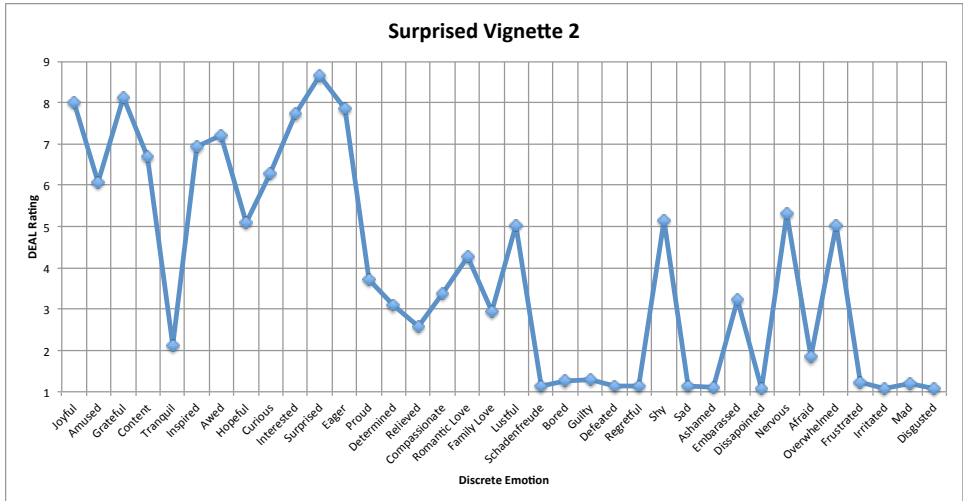
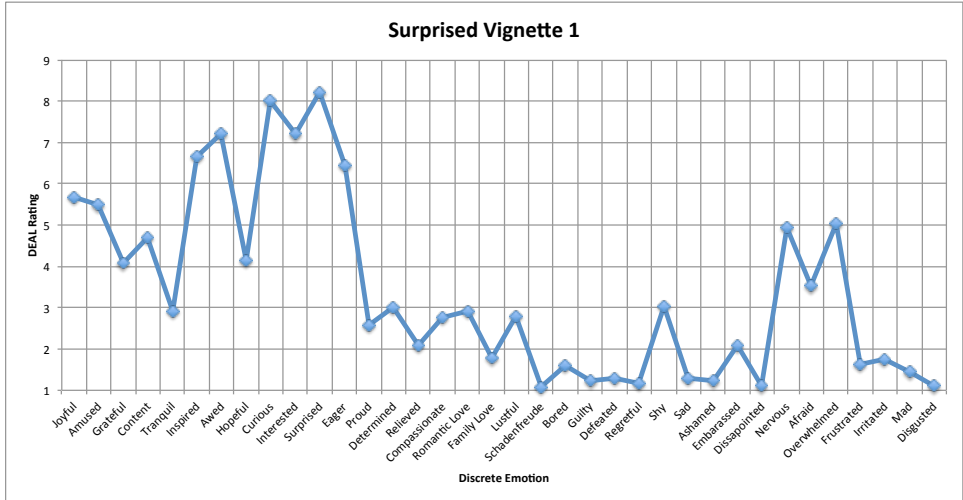












Study 1 Calculated Sums of Squares

AMUSED		
Vignette 1	Vignette 2	Vignette 3
340.23	311.43	265.34
CALM/TRANQUIL		
Vignette 1	Vignette 2	Vignette 3
398.74	260.12	235.56
CONTENT/SATISFIED		
Vignette 1	Vignette 2	Vignette 3
224.34	335.83	230.01
DETERMINED		
Vignette 1	Vignette 2	Vignette 3
304.25	232.76	246.67
FAMILY LOVE		
Vignette 1	Vignette 2	Vignette 3
452.95	434.37	362.11
HOPEFUL		
Vignette 1	Vignette 2	Vignette 3
393.07	294.07	437.40
INTERESTED		
Vignette 1	Vignette 2	Vignette 3
275.77	270.09	211.32
LUST		
Vignette 1	Vignette 2	Vignette 3
334.51	191.76	295.73
RELIEVED		
Vignette 1	Vignette 2	Vignette 3
373.21	458.25	271.83
SCHADENFREUDE		
Vignette 1	Vignette 2	Vignette 3
230.31	359.50	355.21

AWED		
Vignette 1	Vignette 2	Vignette 3
418.40	432.01	304.76
COMPASSIONATE		
Vignette 1	Vignette 2	Vignette 3
208.98	156.01	139.83
CURIOUS		
Vignette 1	Vignette 2	Vignette 3
273.71	277.00	185.67
EAGER		
Vignette 1	Vignette 2	Vignette 3
259.01	280.69	345.54
GRATEFUL		
Vignette 1	Vignette 2	Vignette 3
425.97	532.87	259.94
INSPIRED		
Vignette 1	Vignette 2	Vignette 3
405.03	335.89	386.93
JOYFUL		
Vignette 1	Vignette 2	Vignette 3
335.73	274.15	351.17
PRIDE		
Vignette 1	Vignette 2	Vignette 3
419.74	441.28	376.96
ROMANTIC LOVE		
Vignette 1	Vignette 2	Vignette 3
213.91	333.00	320.71
SURPRISED		
Vignette 1	Vignette 2	Vignette 3
330.62	478.54	480.38

Study 2 Pre and Post-Study Script

ELICITATION STUDY SCRIPT – PRE-STUDY 2:

Thank you for your participation in our study. Today, you will be watching 2 clusters of film clips. After watching a given cluster of clips you will complete a section of a survey.

To begin, watch the clips located in the first folder, labeled (1). After you have watched a clip, proceed to the survey portion assigned to that video. The survey is aimed at identifying the emotions you felt during the viewing process. If necessary, you may re-watch a particular video.

Please note that some clips require you to take the perspective of a particular character. Additionally, certain clips have 2 parts. If a film is listed twice, please watch both clips consecutively and imagine them as a singular clip.

After you have completed the first page of the survey and have watched the first folder of video clips, please call me back into the room so you may proceed to the next cluster of clips and associated survey.

ELICITATION STUDY SCRIPT – POST-STUDY 2:

Thank you for completing our study. Your survey responses will aid in our study aimed at finding the best film clips for inducing discrete positive emotions. If you have any questions concerning our study or the experimental condition you were placed in, please feel free to contact the main experimenter, Andrea Lagotte. Her e-mail address and phone number can be found on the SONA website under the study description.

Study 2 Title and Description of all Film Clips

AWED/AMAZED:

- (1) “Planet Earth” (2) – The clip begins with soft music and a picture of planet earth before beginning a series of various high-energy nature scenes that progress as the music builds.
- (2) “Apollo 13” (2) – Astronauts are shown getting on the spaceship and ends with a successful liftoff.
- (3) “Apollo 13” (1) – Employees in the control room are speaking with the astronauts as they prepare for and complete a successful liftoff.
- (4) *Grand Canyon* – The clip depicts sweeping scenes of the Grand Canyon paired with music.
- (5) *The Power of Nature* – The clip begins with a picture of planet earth from space and transitions into landscape and animals scenes.
- (6) “Planet Earth” (1) – Narrated by a male voice, this clip depicts powerful images of earth including the landscape and animals.

AMUSED:

- (1) “This Means War” – Main female character and two main male characters are shown having a paintball fight
- (2) “Waterboy” – Comedic scene among football players and local in the locker room
- (3) “Bridesmaids” (Drunk) – Main female character is shown drunkenly rambling on airplane
- (4) “It’s Kind of a Funny Story” – Psychiatric patients share jokes on the basketball court
- (5) “My Cousin Vinny” – Comedic scene during court trial
- (6) “Bridesmaids” (Talking) – Larger female character shares funny interaction with the male passenger sitting next to her on airplane
- (7) “Accepted” – Two college students see their friend publically dressed up as a hotdog
- (8) *Scrubs* – Montage of comedic scenes from the television show

CALM:

- (1) *Dolphins* – Dolphins under water, sounds included
- (2) *Rain* – Single frame of branch covered with water droplets and rain falling with rain sounds in background
- (3) *Nature Scenes* – Multiple ocean and nature scenes combined with tranquil music
- (4) *Purple Lake* – Single frame of purple hued lake with water sounds in background
- (5) *Beach* – Single frame of beach with gently turning tide and ocean sounds in background
- (6) *Green Stream* – Single frame of running stream running through forest with stream and bird sounds in background

COMPASSIONATE:

- (1) *Parkinson's* – Michael J. Fox discusses life with Parkinson's.
- (2) "The Blindside" – Sandra Bullock's character recognizes that the main character, Mike has nowhere to stay and offers him a place in her home.
- (3) "The American President" – The president gives a moving speech.
- (4) *Olympics* –Olympic runner Derek Redmond gets injured during the race and his helped to the finish line by his father
- (5) "Love and Other Drugs" – Anne Hathaway's character is suffering from Parkinson's and attends a support group with others afflicted by the disease
- (6) "The Pursuit of Happyness" – Will Smith's character and his son are forced to sleep in the subway public bathroom
- (7) *Child Poverty* – The clip speaks about children facing life-threatening poverty.
- (8) *Childhood Hunger* – The clips speaks about children who are going hungry.

CURIOUS:

- (1) "Back to the Future" – A mysterious smoke leaves the back of a truck as a novel car comes rolling out the back
- (2) "Alice in Wonderland" – Alice curiously inspects a rabbit hole
- (3) "The Hangover" – The main characters wake up from a night of drinking and wonder what exactly happened the night before
- (4) *Feynman Series* – Male narrator speaks about stimulating aspects of life and science
- (5) "Alice in Wonderland" (Cartoon) – Alice curiously inspects a rabbit hole
- (6) *Cat* – Cat inspects a drinking fountain

DETERMINED:

- (1) "Any Given Sunday" – Coach gives speech to players in locker room
- (2) "The Guardian" – National Guard trainees go through training process
- (3) "Miracle" – Coach gives speech to US hockey players in locker room
- (4) "300" (1) – Main character speaks to blonde character before acknowledging all of the Spartans ending with the claim, "Tonight, we dine in hell"
- (5) "Rocky I" – Rocky is shown training
- (6) "Remember the Titans" – During game, coach gives speech to football players
- (7) "Cool Runnings" – One character tells the other character to look in the mirror and recognize pride
- (8) "300" (2) – Main character gives speech to his 10,000 Spartan warriors

GRATEFUL:

- (1) "Schindler's List" – Factory workers show appreciation to main character
- (2) "50:50" – A look into the experience of battling cancer
- (3) "The Pursuit of Happyness" – Will Smith's character is offered a job opportunity
- (4) "The Blindside" – Main character is given his own room with a bed
- (5) "Coach Carter" – Players show appreciation to their coach

HOPEFUL:

- (1) “Shawshank Redemption” – Morgan Freeman gives a monologue as he moves on from his past and makes it to the final scene on the beach.
- (2) “The Graduate” – The couple manages to escape together and find themselves on a bus, leaving the madness behind
- (3) “Tangled” – The male and female characters share a moment on the water surrounded by floating luminaires
- (4) “The American President” – The president gives a speech to a full room
- (5) “The Wizard of Oz” – The main cast skips and sings down the yellow brick road

INSPIRED:

- (1) *America’s Got Talent* – Susan Boyle wows judges with a voice that does not match her appearance
- (2) *Parkinson’s* – Michael J. Fox acknowledges the strength and courage of Parkinson’s patients
- (3) “Lord of the Rings” – Sam gives an inspiring speech to a downtrodden Frodo
- (4) “The Pursuit of Happyness” – Will Smith gives speech to his son to let him know that he can do anything he wants to with his life
- (5) “Coach Carter” – Players remain at desks in gymnasium to show their commitment to their game and their coach
- (6) “Starwars” – Luke Skywalker accepts advice from Yoda

INTERESTED:

- (1) “Hugo” – Ending scene, viewers can hear the faint voice of a person talking while viewing a crowded room
- (2) “Midnight in Paris” – Scenes of Paris
- (3) *Newsroom* – Main character gives surprising speech that indicates that the United States is not the greatest country in the world
- (4) “Scent of a Woman” – Audience pays close attention to interesting lawyer during a court case
- (5) “Pursuit of Happyness” – Will Smith’s son is engaged in a box that his father claims is a time machine
- (6) “The Prestige” – Audience watches as the magician performs an impressive trick

JOYFUL:

- (1) *Puppy* – A video of a small, smiling puppy is paired with lively music
- (2) “Big” – Tom Hanks’ character is shown playing a large piano in a toy store
- (3) “Charlie Wilson’s War” – A room full of people watch the television together and celebrate good news
- (4) “Happy Feet” – The main penguin slowly begins to dance until he is dancing feverishly
- (5) *Puppy Can’t Get Up* – Small white puppy is shown rolling back and forth on its back
- (6) “The American President” – The president is reunited with an old flame
- (7) “Amelie” – Amelie is shown smiling on the back of a scooter
- (8) *Kitten* – Small kitten is shown on its back, interacting with a human hand
- (9) *Purina Dogs* – Purina dog food commercial shows a series of dogs

LUST:

- (1) “No Strings Attached” – Ashton Kutcher and Natalie Portman share an intimate moment on the bed
- (2) *Desperate Housewives* – One of the housewives is seduced by a younger man
- (3) *Gossip Girl* – Two main characters fool around in the kitchen
- (4) *LOST* – A steamy scene between two characters trapped in a cage in the jungle
- (5) “Drive” – Two characters make out in an elevator in front of a stranger

PROUD/TRIUMPHANT:

- (1) “Remember the Titans” – Football team experiences an important victory
- (2) *West Wing* – President gives speech to audience members after 9/11
- (3) “Love Actually” – Main character speaks about the greatness of England
- (4) “The Blindside” (Football) – Mother proudly claims that Mike is her son
- (5) “The Blindside” (Graduation) – Mother watches as her son graduates high school
- (6) *1980 USA Game* – USA Olympic teams wins important victory
- (7) “Crimson Tide” – Triumphant battle scene

RELIEVED/UNBURDENED:

- (1) “The Sting” – Intense murder scene turns out to be a hoax
- (2) “Babel” – Housekeeper is found by police after being lost in the desert
- (3) “50:50” – Friend find out that main character has a 50/50 chance of surviving
- (4) “Garden State” – Two main characters stand in the pouring rain and scream
- (5) “Hotel Rwanda” – Main character realizes that his wife and children are not dead
- (6) “Hugo” – Train conductor realizes he has not hit the young boy
- (7) “The Double” – Audience watches to see if the young woman falls from the ladder in a library
- (8) “Black Hawk Down” – Soldiers finally reach a safe location

ROMANTIC LOVE:

- (1) “Breaking Dawn” – Series of romantic scenes shared between the film’s main couple
- (2) “Dear John” – Series of romantic scenes shared between the film’s main couple
- (3) “She’s All That” – Main couple meet by the pool after prom and share a romantic moonlit dance
- (4) “No Strings Attached” – Ashton Kutcher’s character professes his love to Natalie Portman’s character outside of the hospital emergency room
- (5) “The Notebook” (Rain) – Ryan Gosling’s character professes his undying love to Rachel McAdam’s character on a boat dock, in the rain
- (6) “Garden State” – Zack Braff’s character explains to Natalie Portman’s character that he cannot stand to leave her behind because he is in love with her
- (7) “Pride and Prejudice” – Romantic interaction between the film’s main couple paired with emotionally charged instrumental music
- (8) “The Notebook” (Beach) – Ryan Gosling and Rachel McAdam’s character laugh and play with one another in the ocean
- (9) “Love Actually” – One of the film’s character shows up at a doorstep and professes his love through a series of posters

SCHADENFREUDE:


- (1) “Lion King” – Simba gets revenge on Scar as he falls to his death
- (2) “She’s All That” – A school bully is given a taste of his own medicine as he is publically forced to eat pizza covered with his own pubic hairs
- (3) “Matilda” – A cruel principal is teased by a powerful Matilda
- (4) “Mean Girls” – The film’s antagonist is faced with her own weight problems
- (5) “The Hunt for Red October” – German submarines are successfully attacked

SURPRISED:

- (1) “Good Will Hunting” – Professor realizes that the impossible problem he left uncompleted in the hallway was solved by the janitor
- (7) “Midnight in Paris” - Owen Wilson is shocked to find out that he has been transported back in time and finds himself amidst great novelists, artists and musicians
- (2) “Back to the Future” – “Doc” is shocked to find out that his invention really worked
- (3) “E.T.” – Little boy takes flight on a bike with E.T.
- (4) “Pretty Woman” – Julia Roberts is surprised as the jewelry box closes on her hand
- (5) “Usual Suspects” – Detective realizes that he has known the culprit all along
- (6) “Shawshank Redemption” – Police officers and other characters realize what has happened to their felon
- (7) *The Chew* – Blonde host is surprised by her fellow co-hosts with visit from her favorite movie star

Study 2 RedCap Survey

Group 5

Resize font:


Thank you for taking taking the time to participate in our study.

Each page of the following survey corresponds to a cluster of video clips - Upon completion of a page, please notify the experimenter so he or she may direct you to the next cluster of video clips.

It is easy to skip over film titles so please pay attention to which film you are responding to.

Please notify the experimenter if you have any questions.

Please watch the following 6 film clips. After watching the complete set of films, please rank the films using the Discrete Emotion Adjective List (DEAL). The DEAL includes 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 the feelings and emotions you experienced when viewing the indicated video clip.

[FILM 1]: "America's Got Talent"

1) **Inspired -- Invigorated -- Marveled**

1 (does not characterize my feelings at all)

2

3

4

5 (characterizes my feelings somewhat)

6

7

8

9 (characterizes my feelings extremely well)

[reset](#)

2) **Surprised -- Astonished**

1 (does not characterize my feelings at all)

2

3

4

5 (characterizes my feelings somewhat)

6

7

8

9 (characterizes my feelings extremely well)

[reset](#)

3) **Compassionate**

1 (does not characterize my feelings at all)

2

3

4

5 (characterizes my feelings somewhat)

6

7

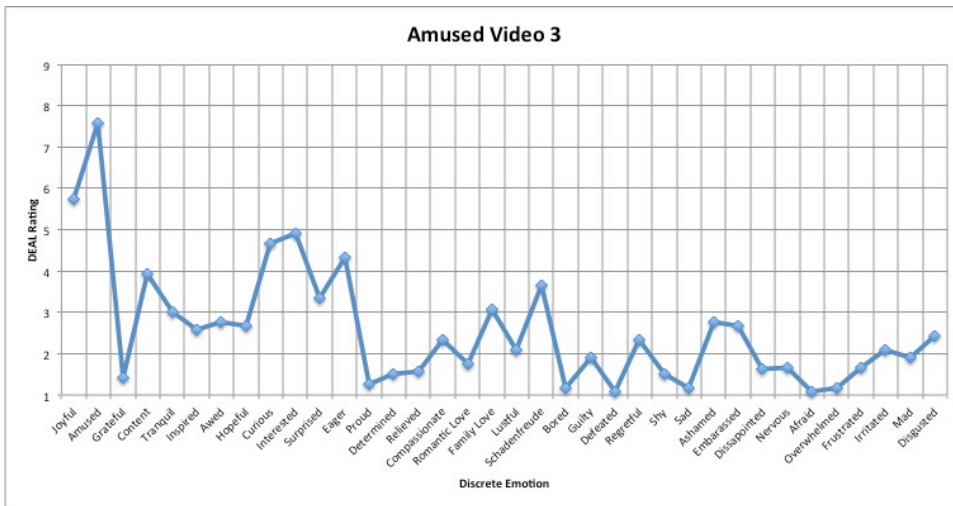
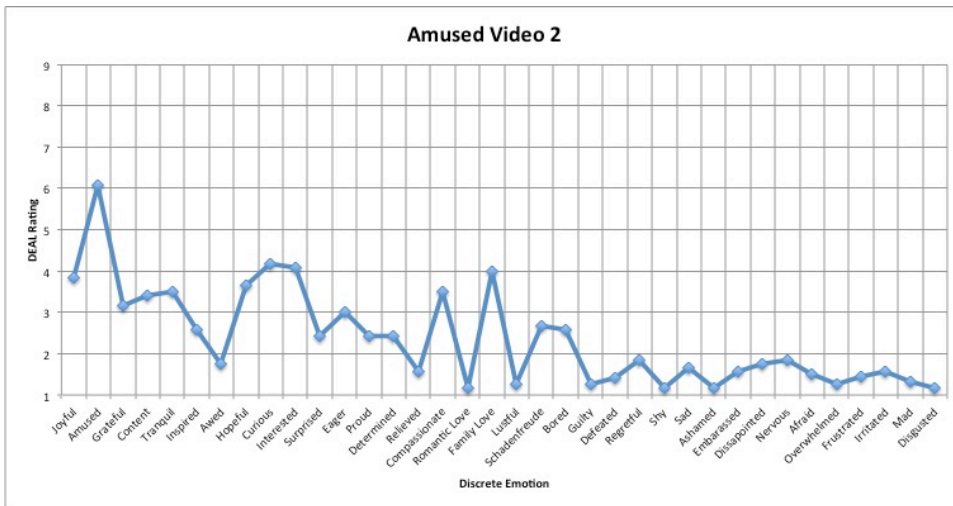
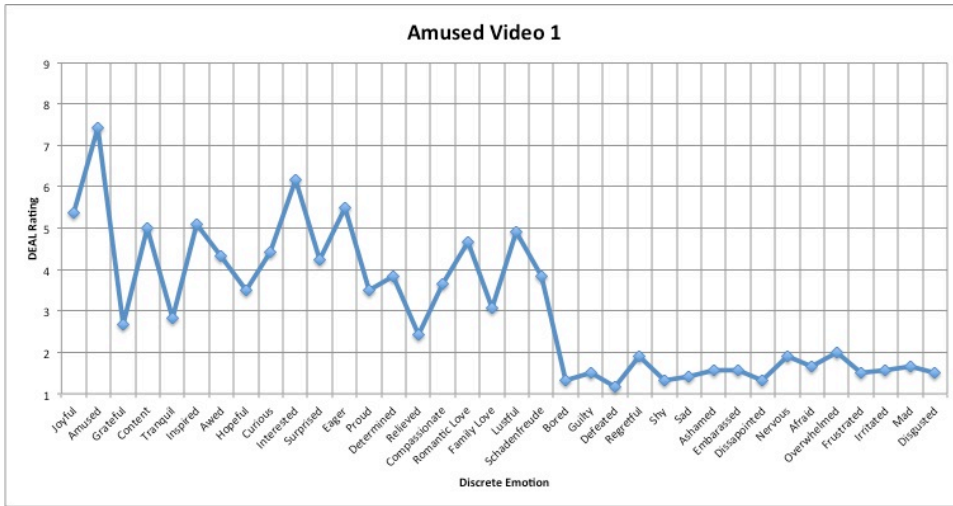
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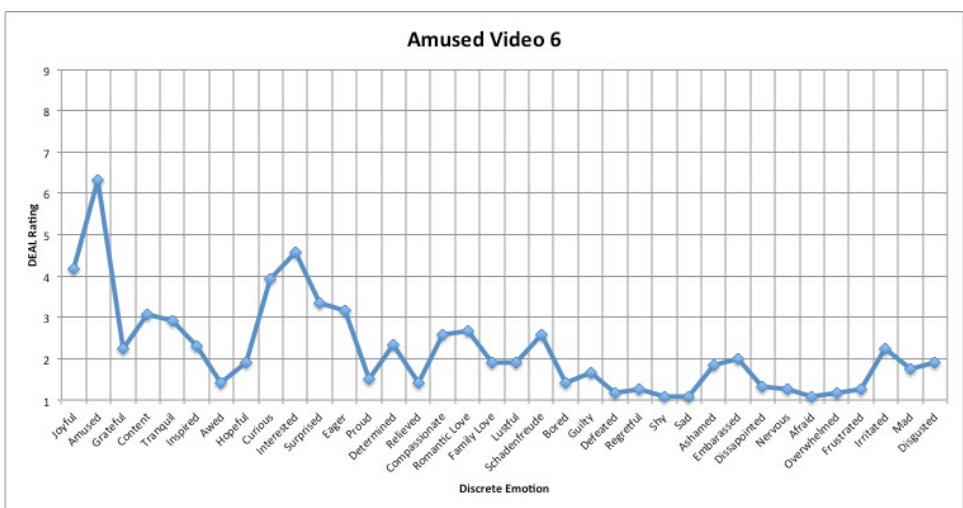
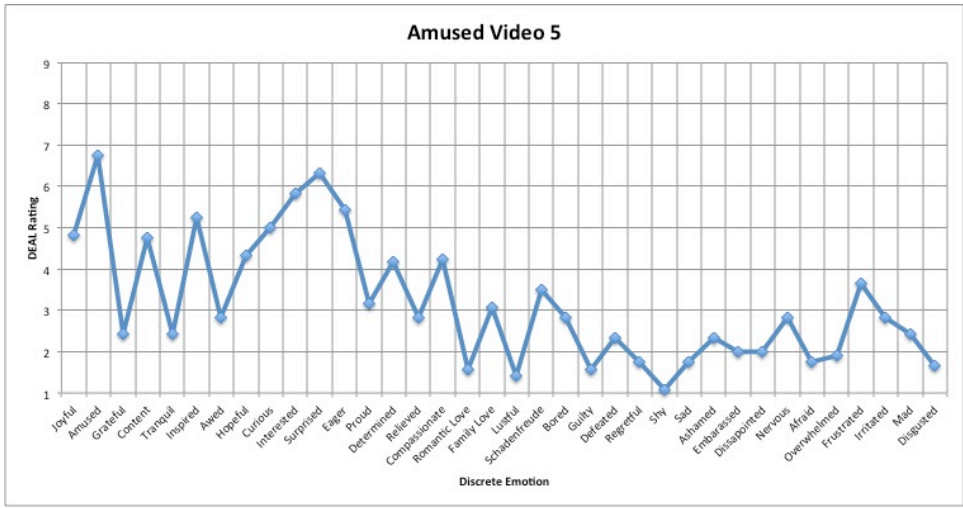
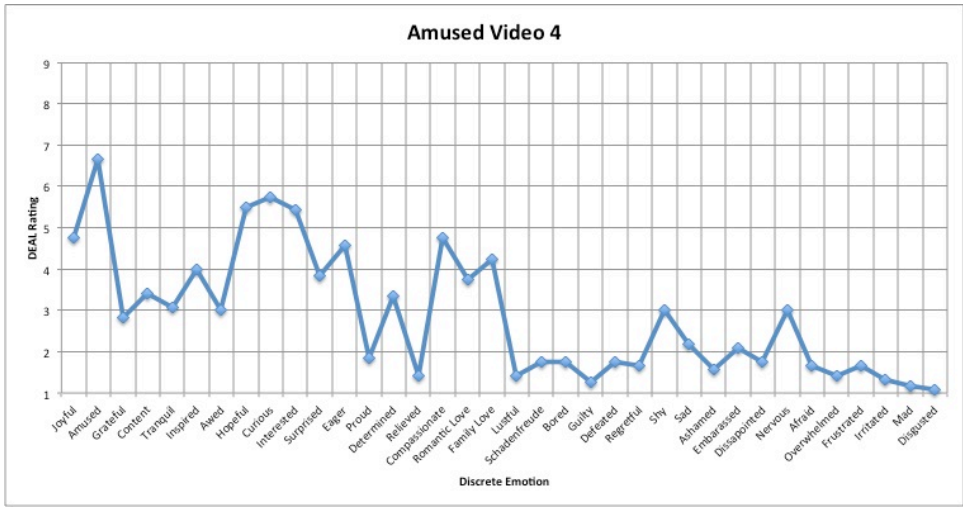
9 (characterizes my feelings extremely well)

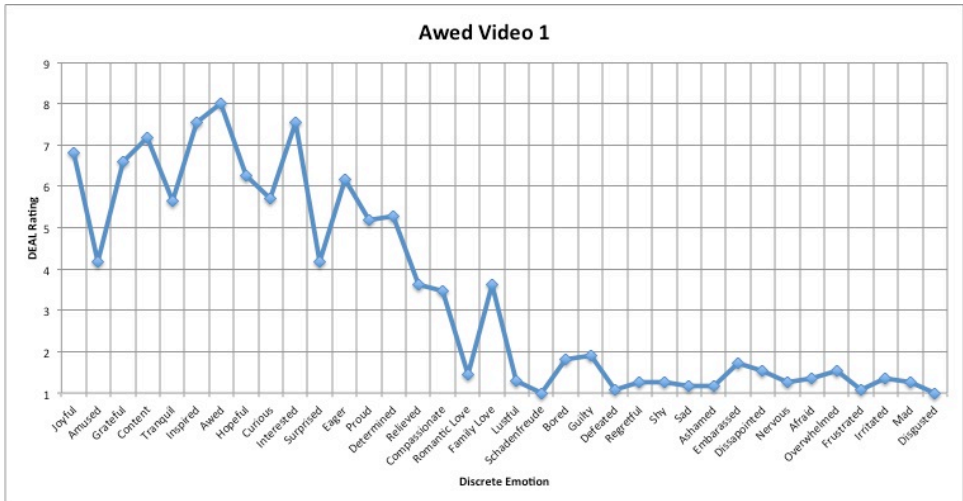
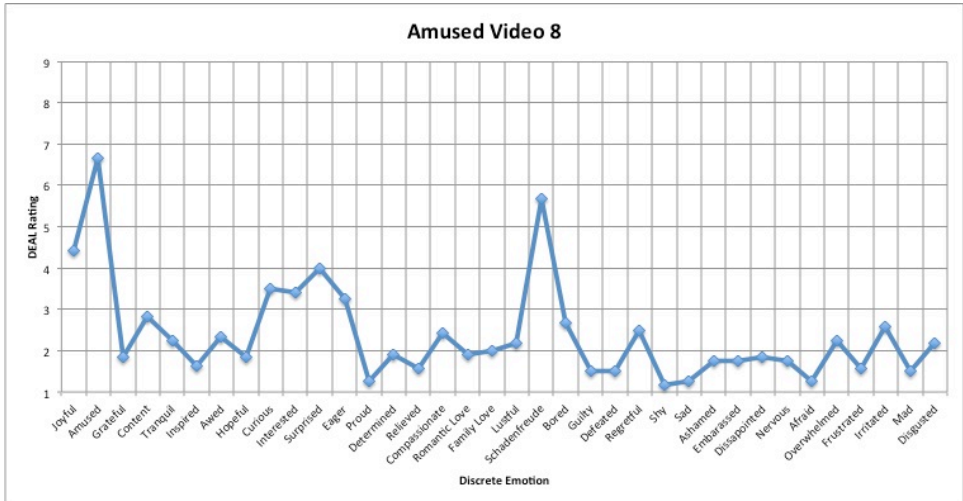
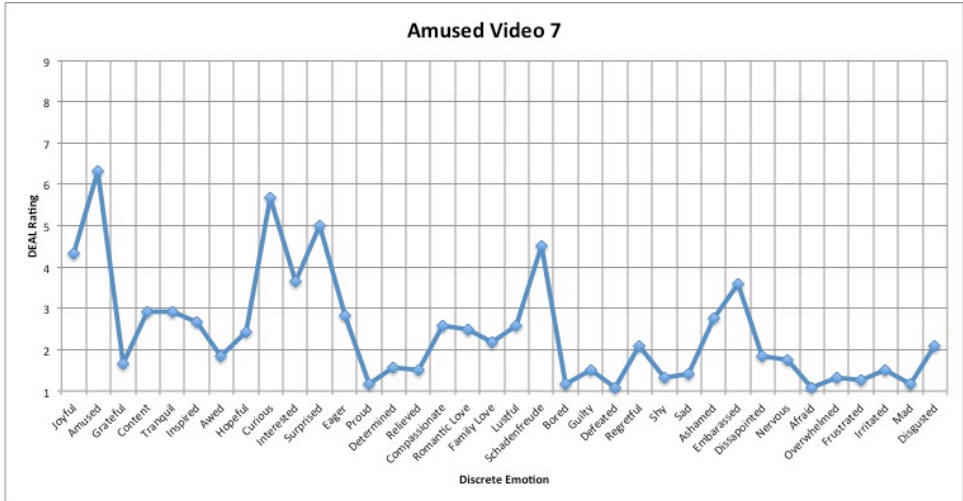
[reset](#)

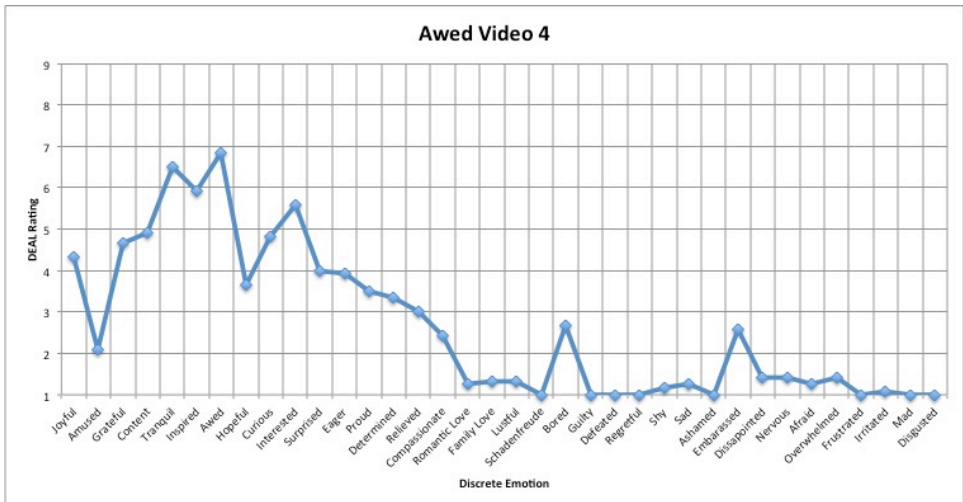
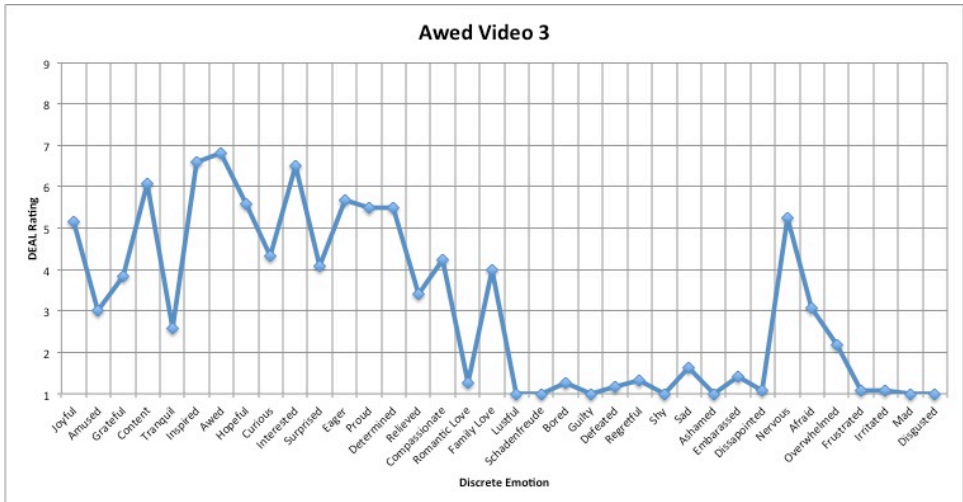
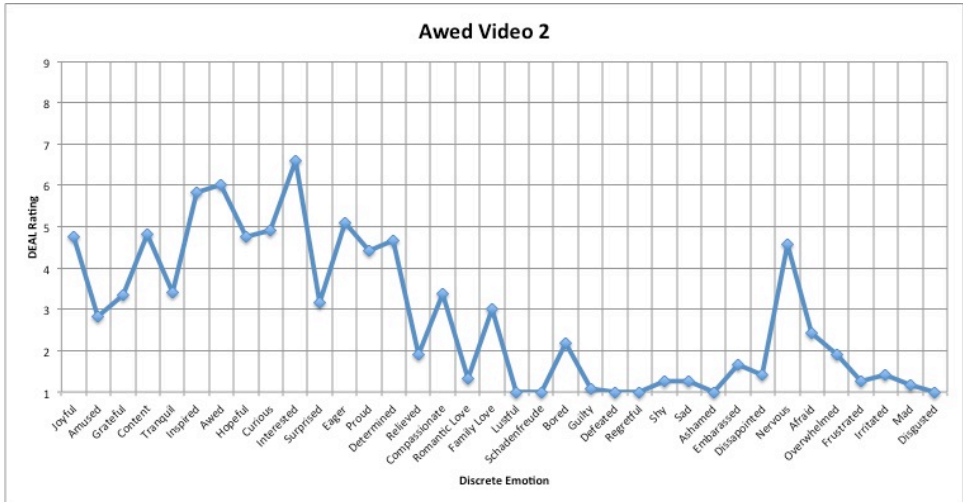
Note. The DEAL emotions ratings continue for all 36 positive and negative emotions. The measure is presented after each of the films presented in a survey.

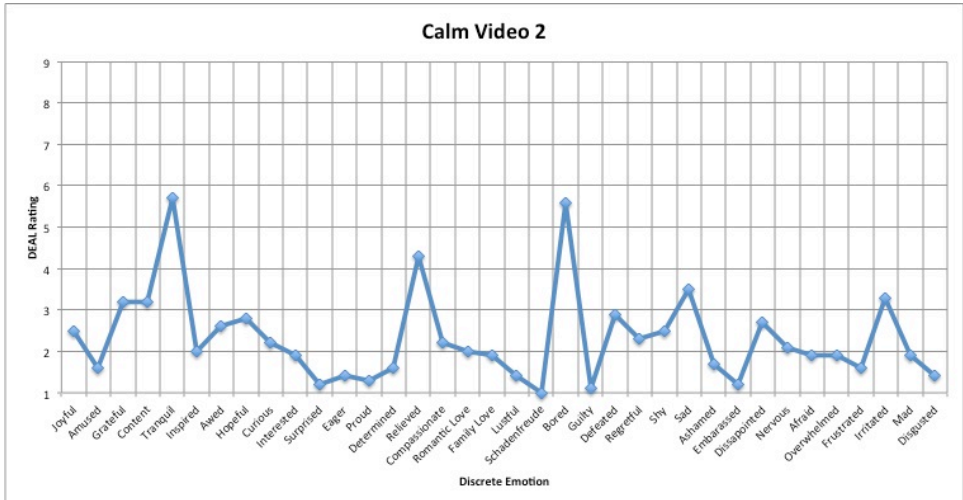
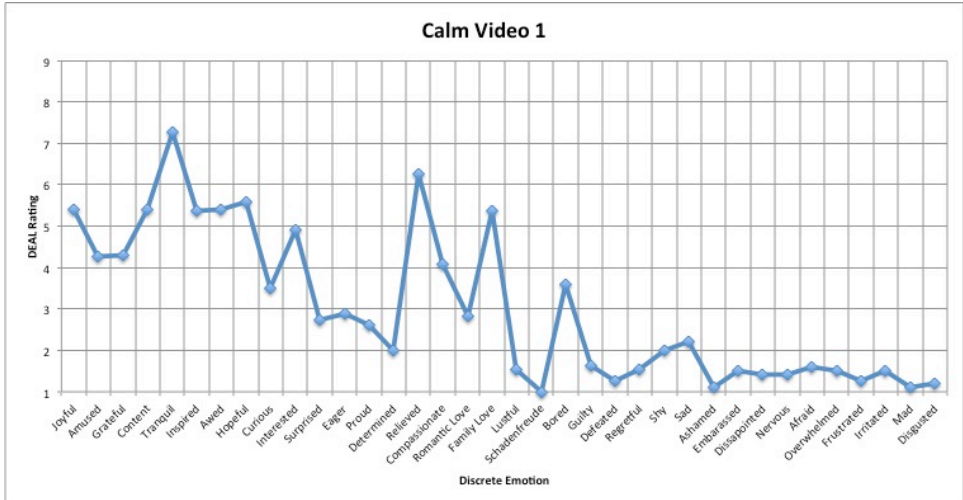
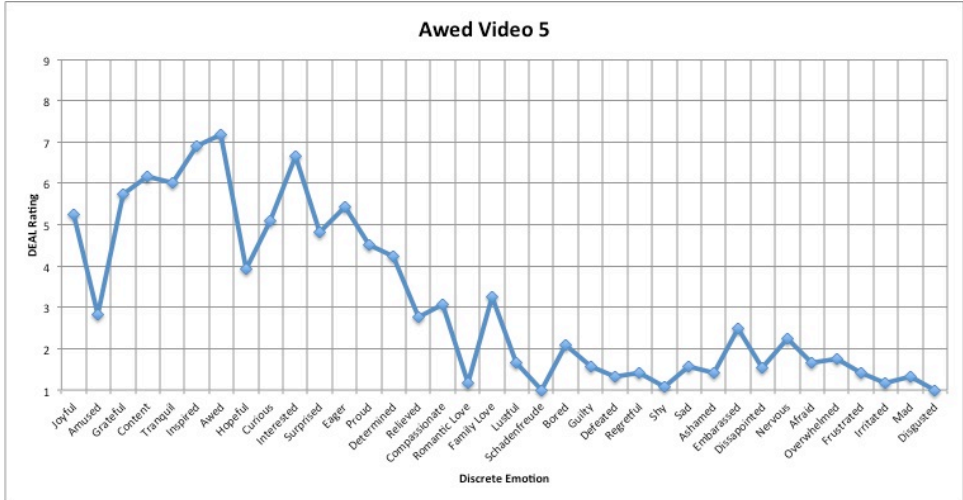
Study 2 Average Emotion Means for Videos

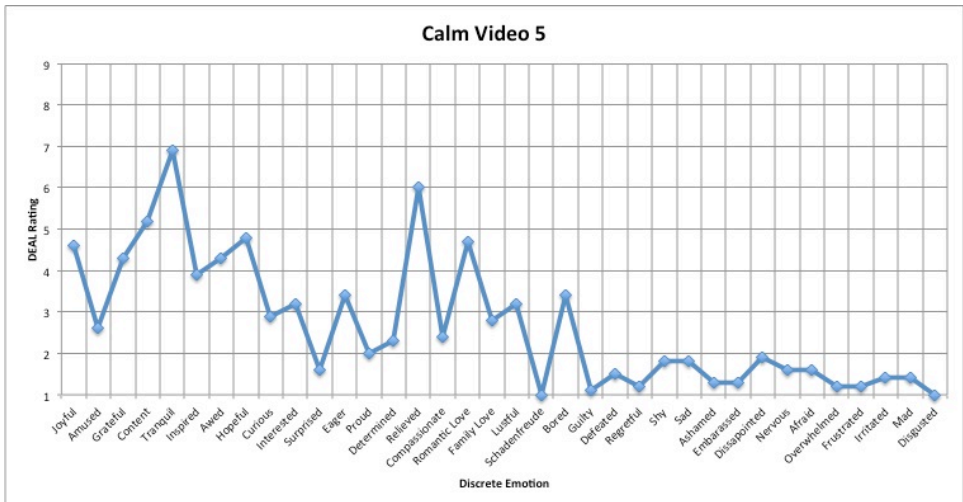
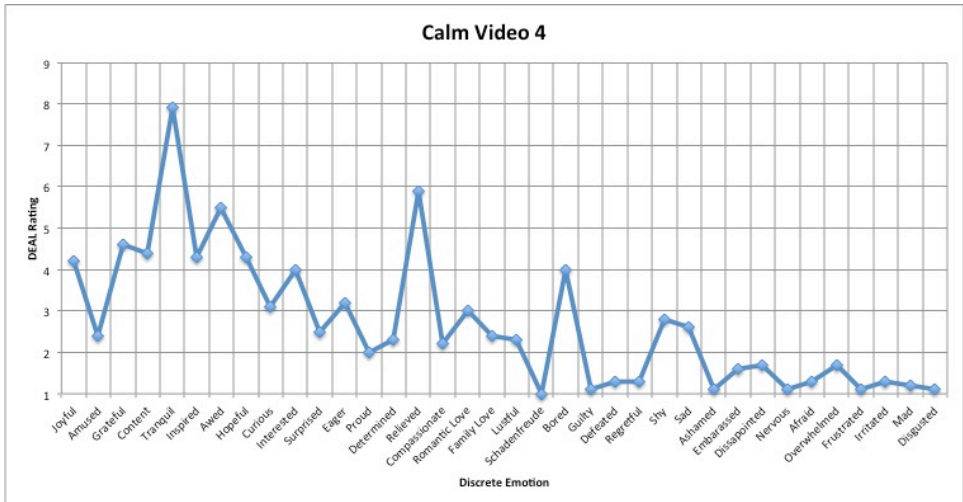
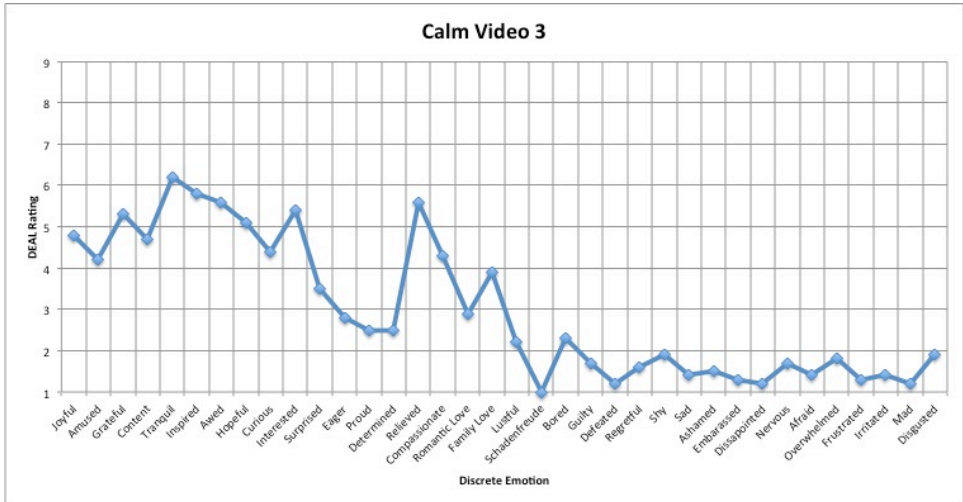


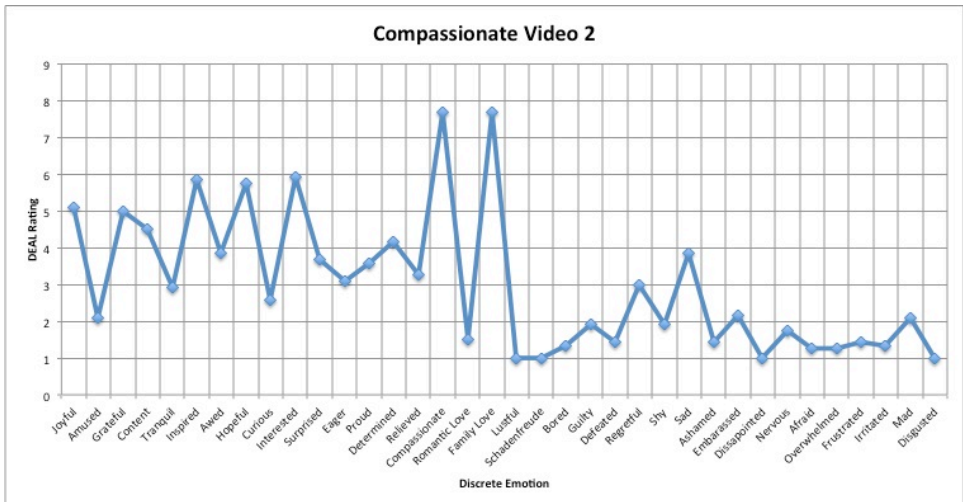
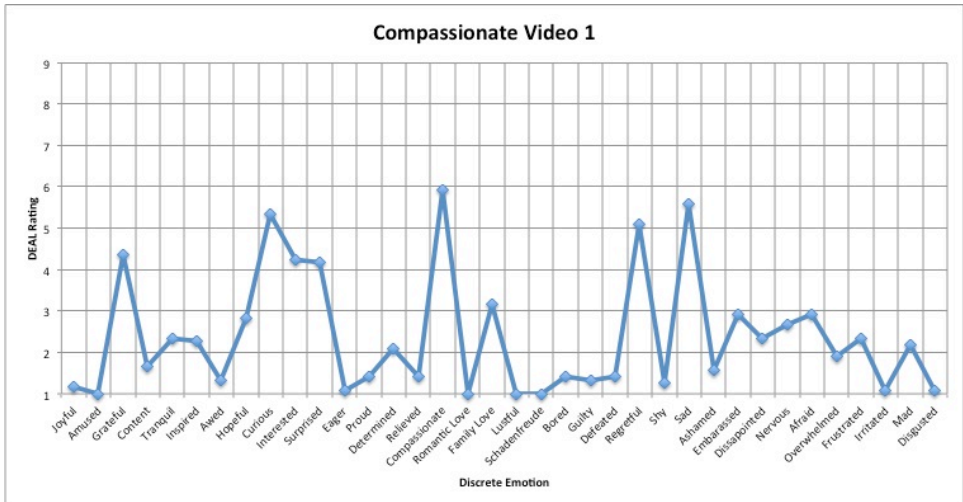
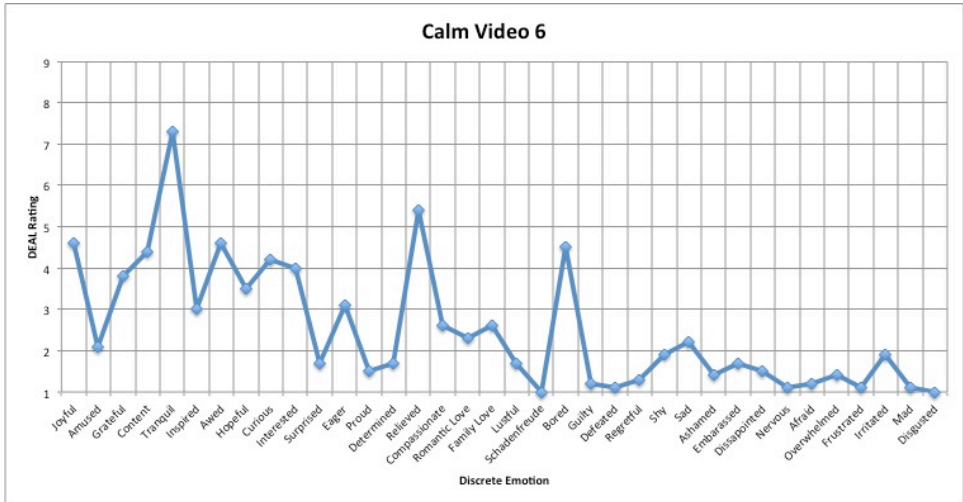


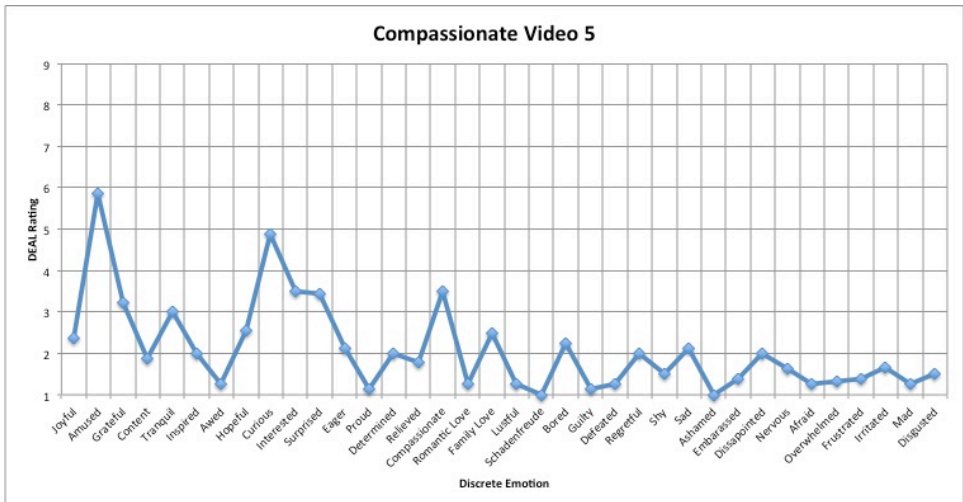
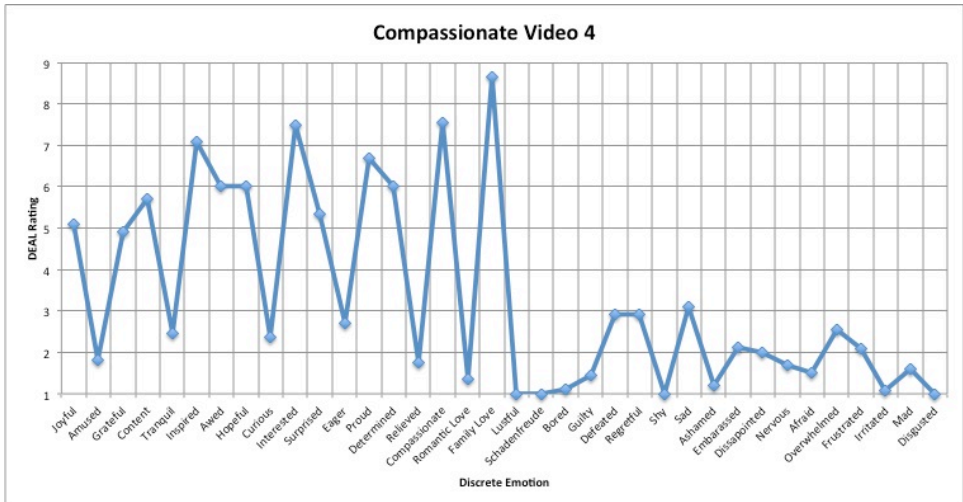
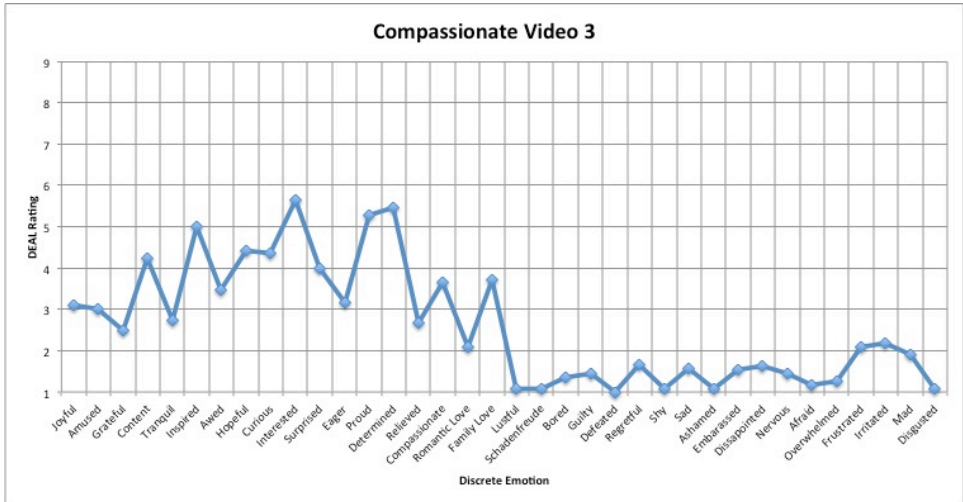


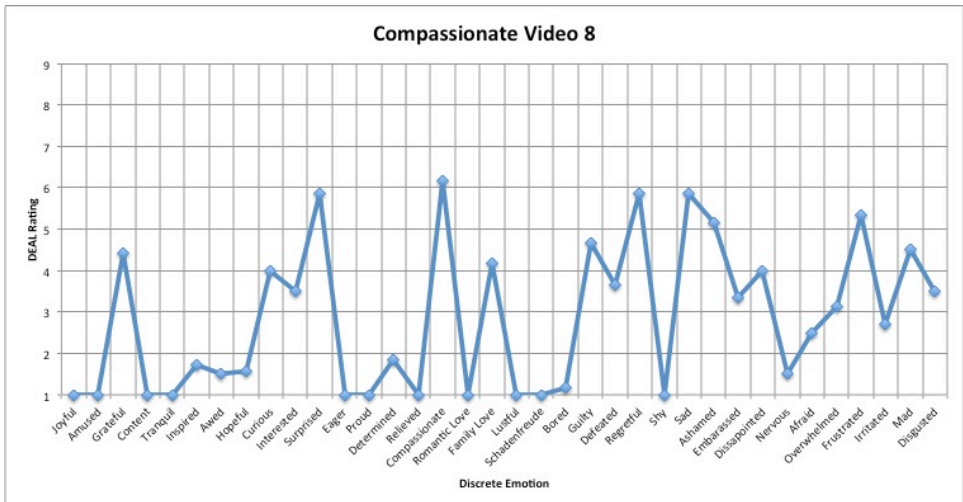
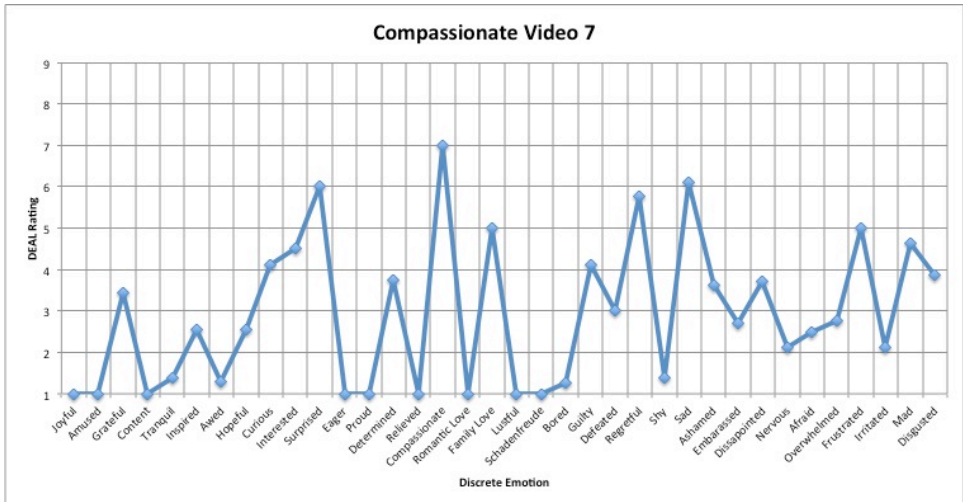
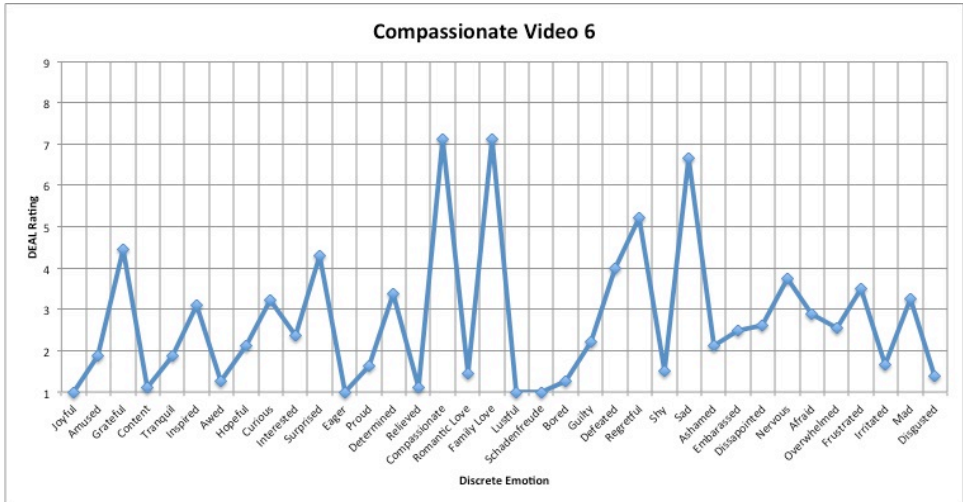


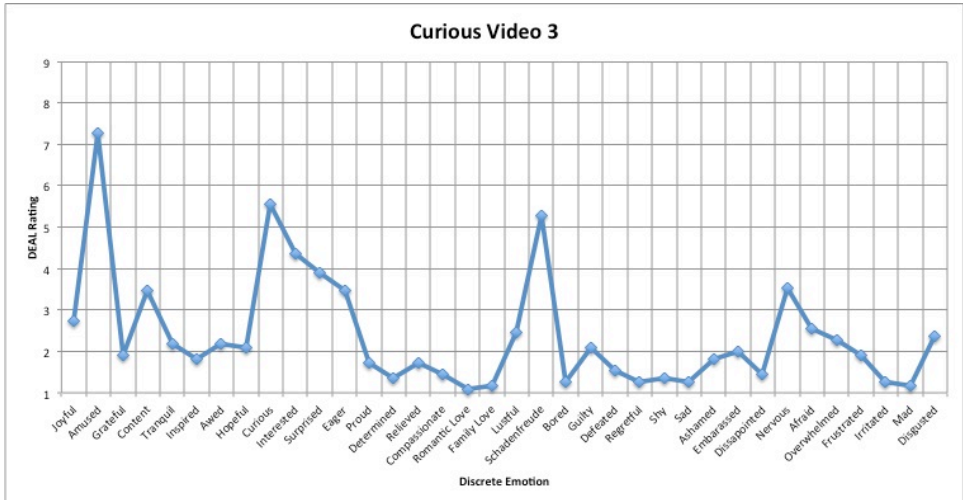
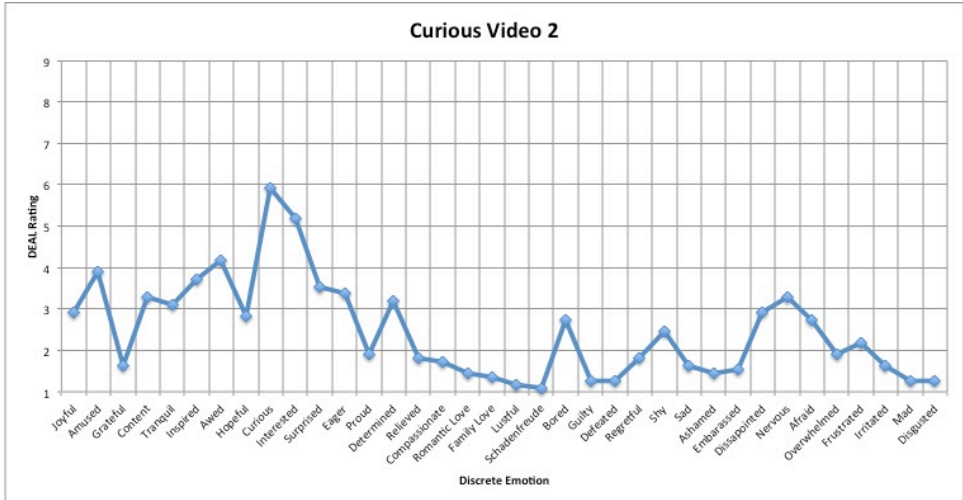
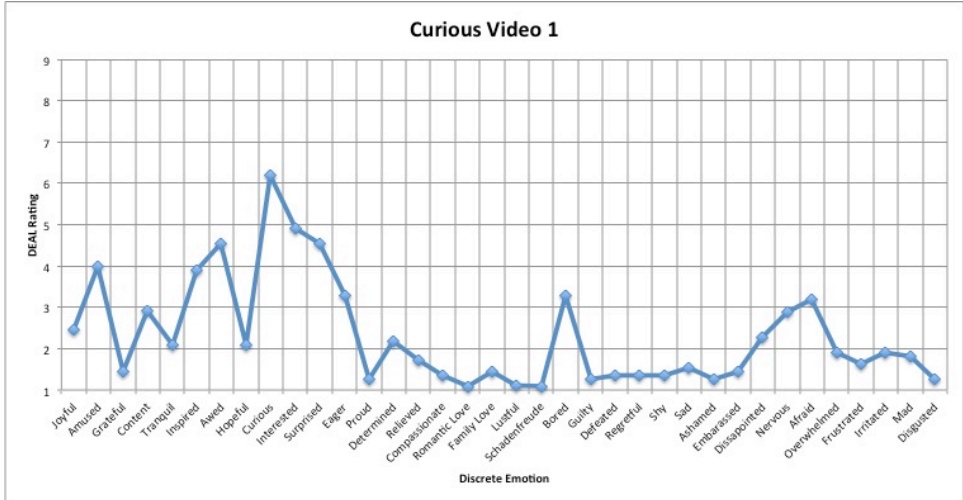


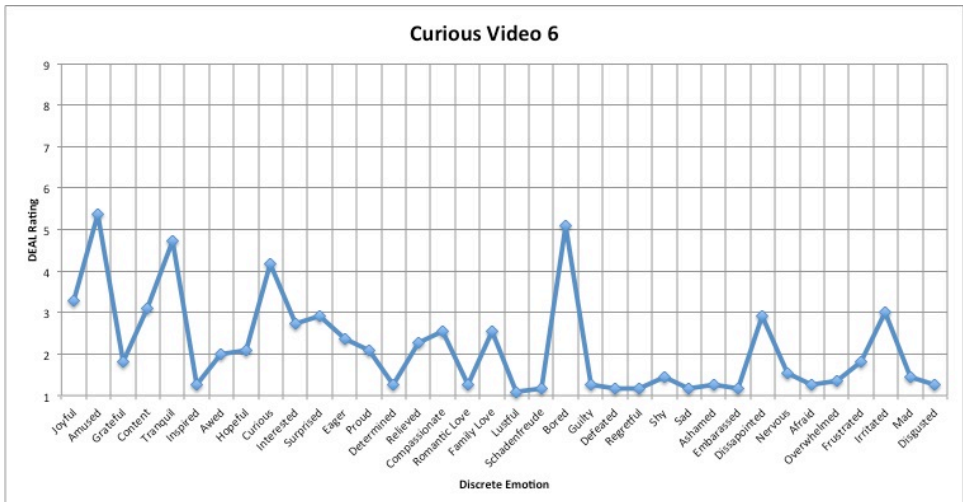
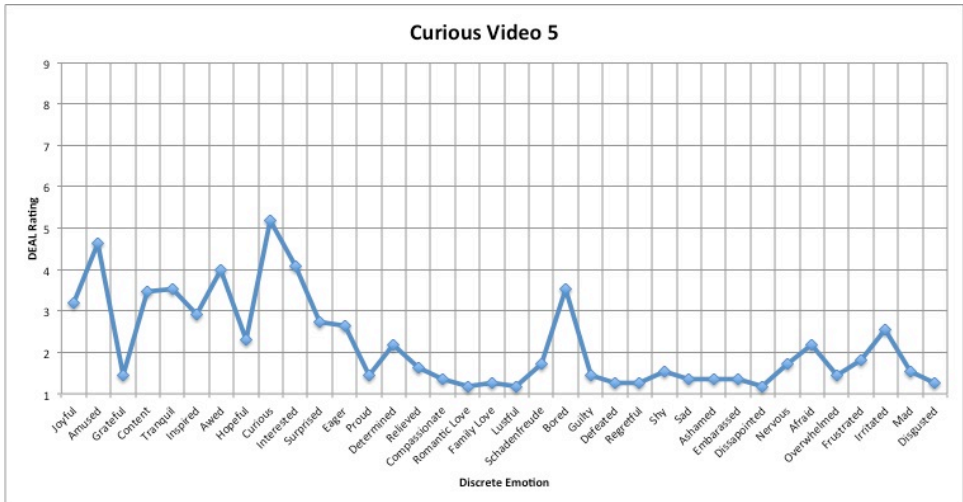
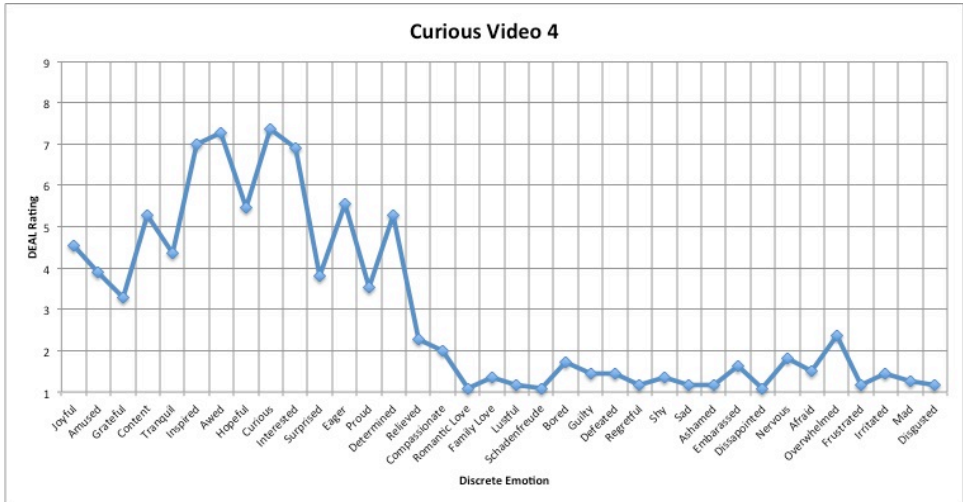


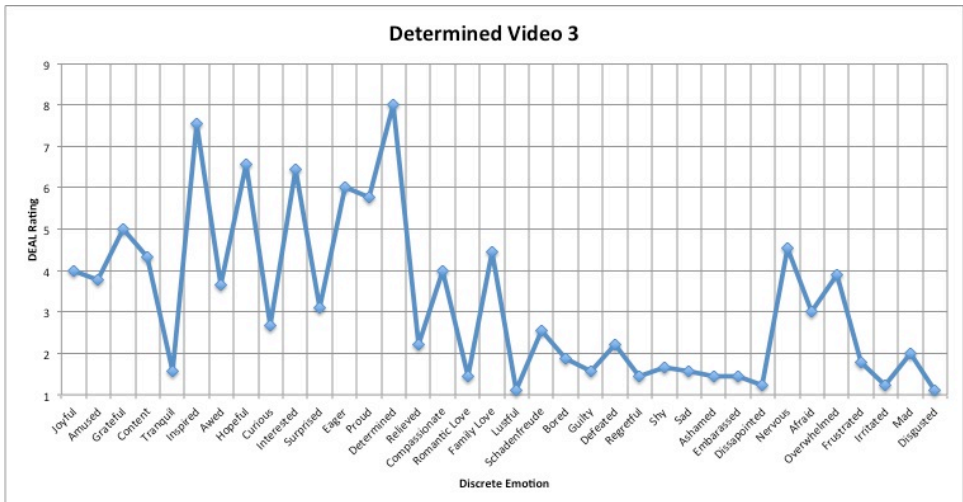
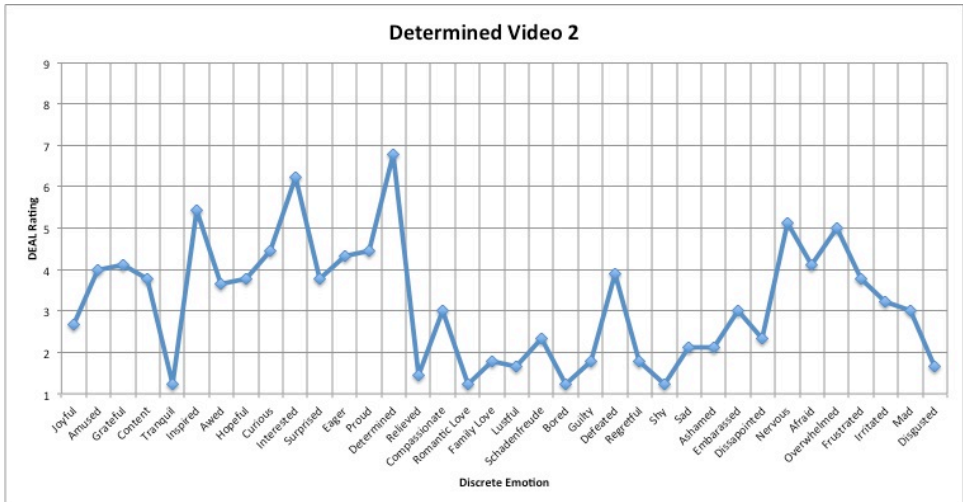
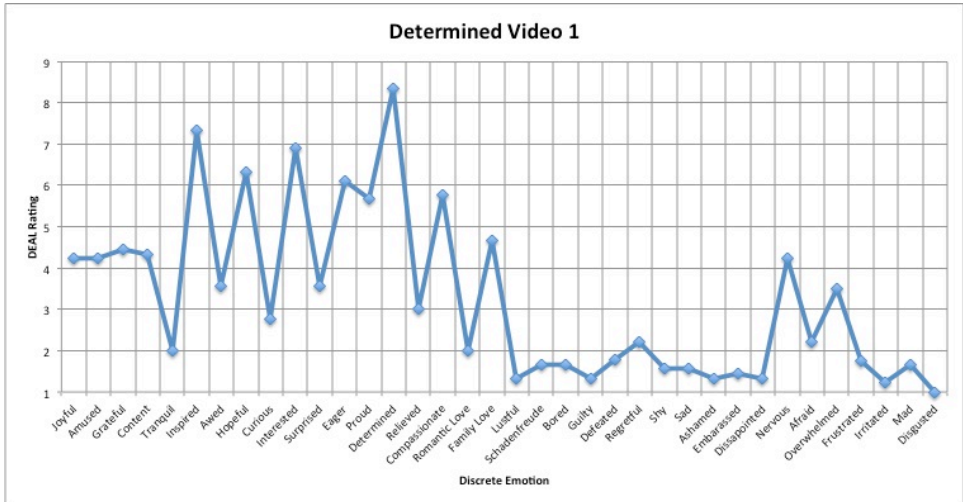


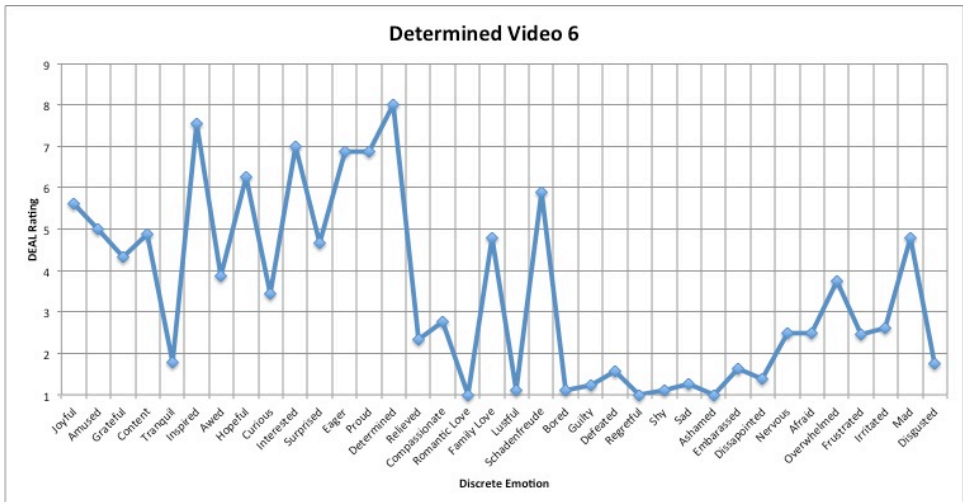
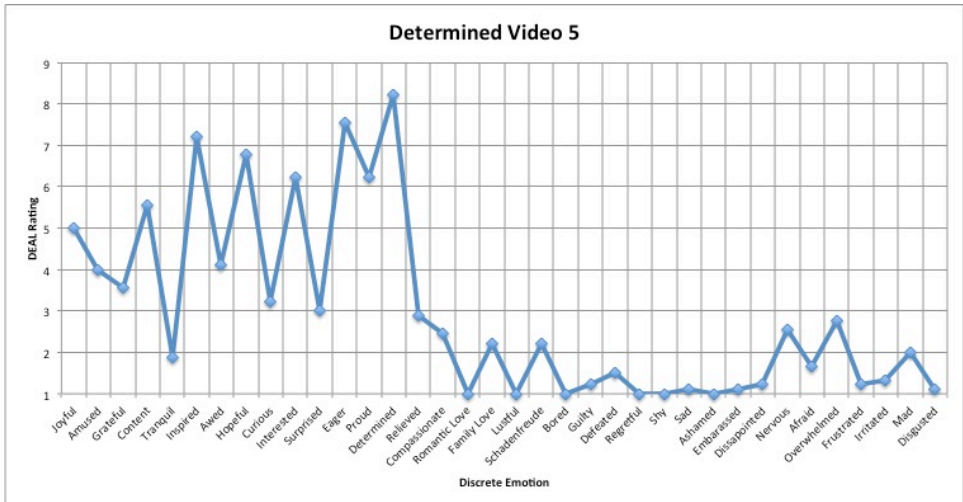
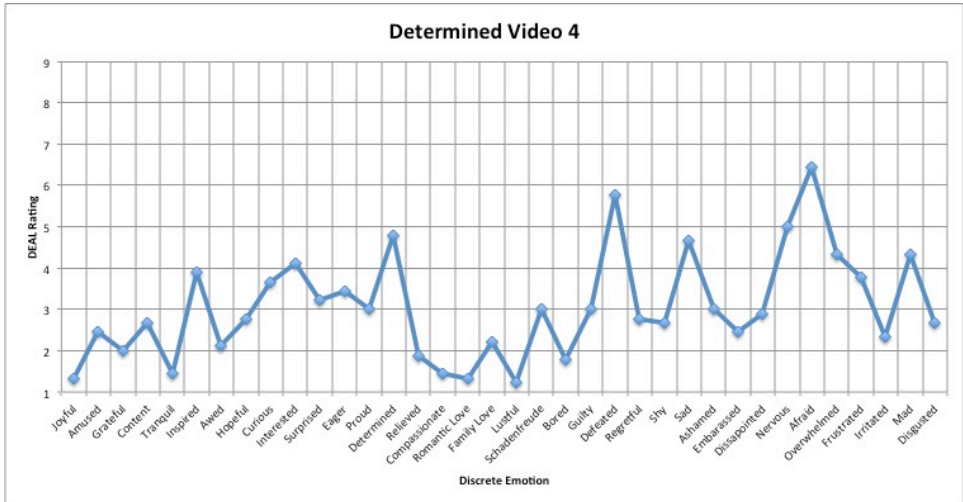


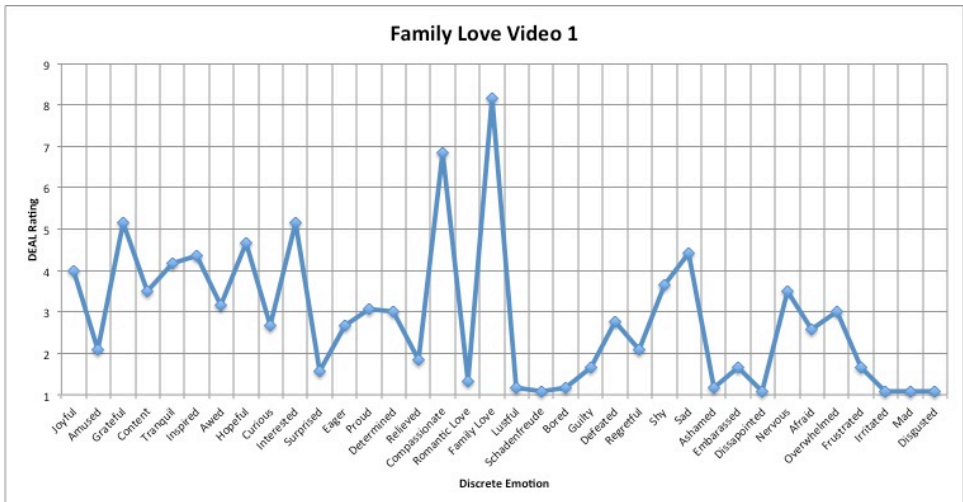
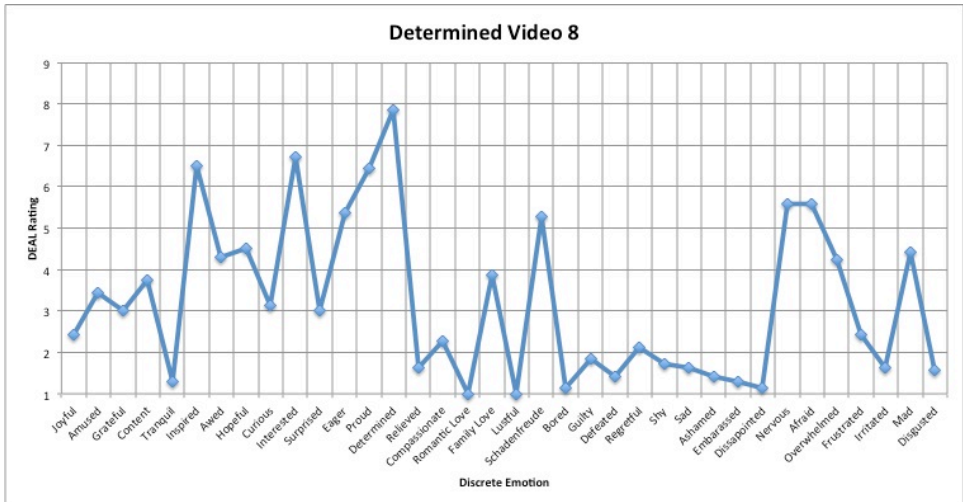
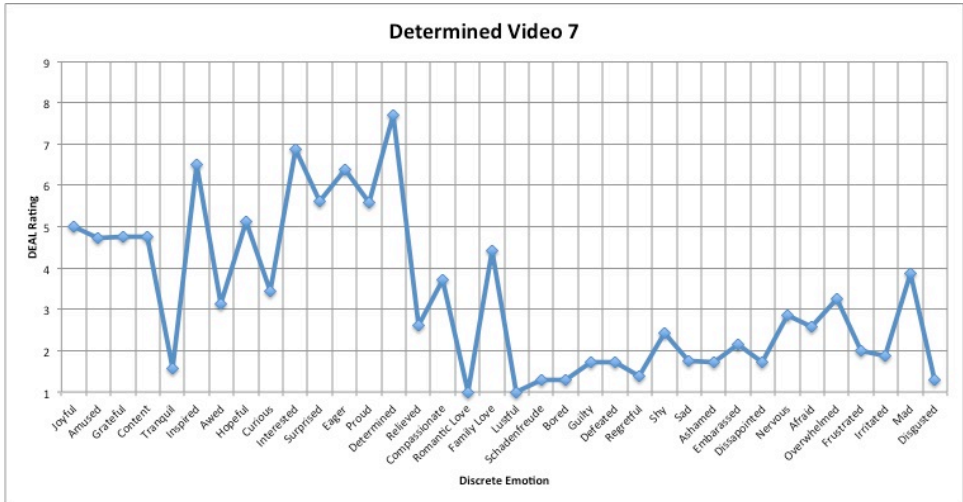


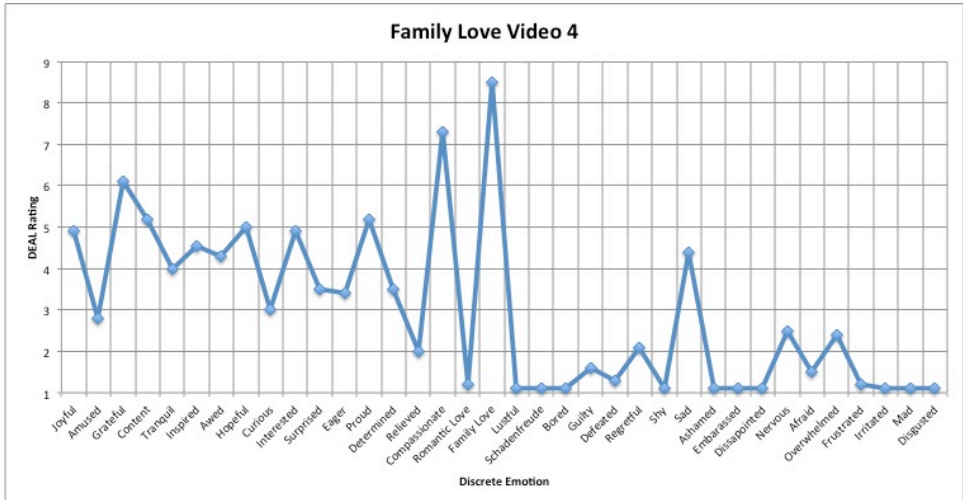
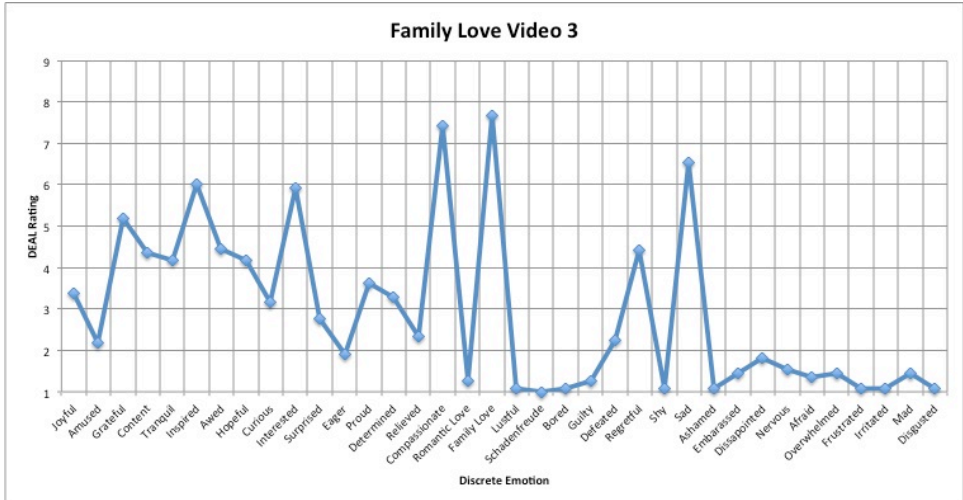
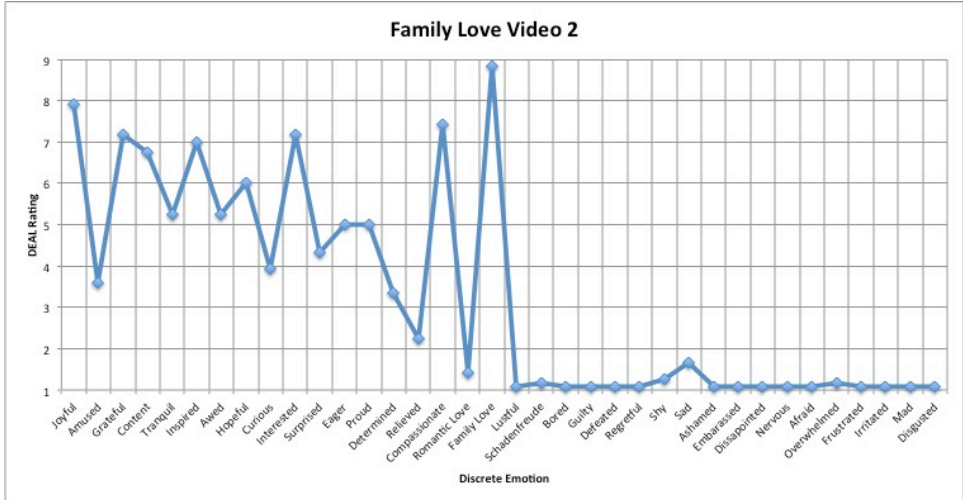


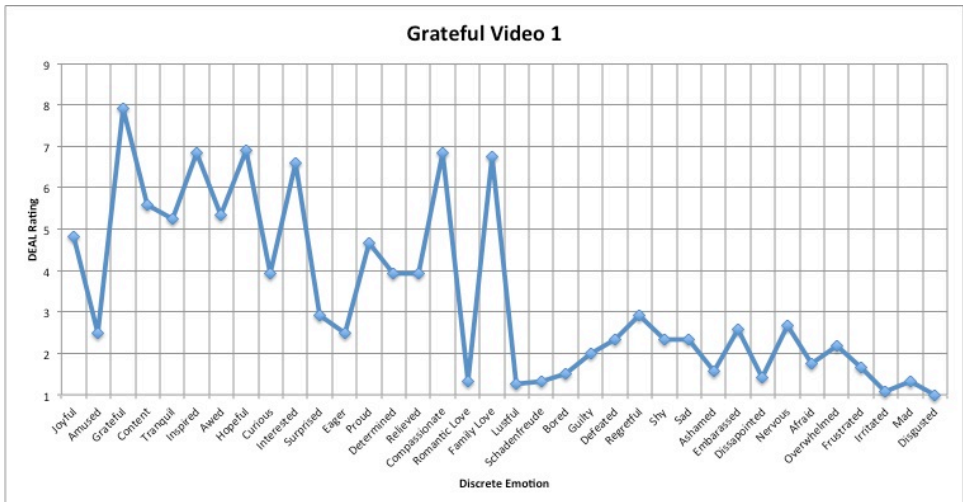
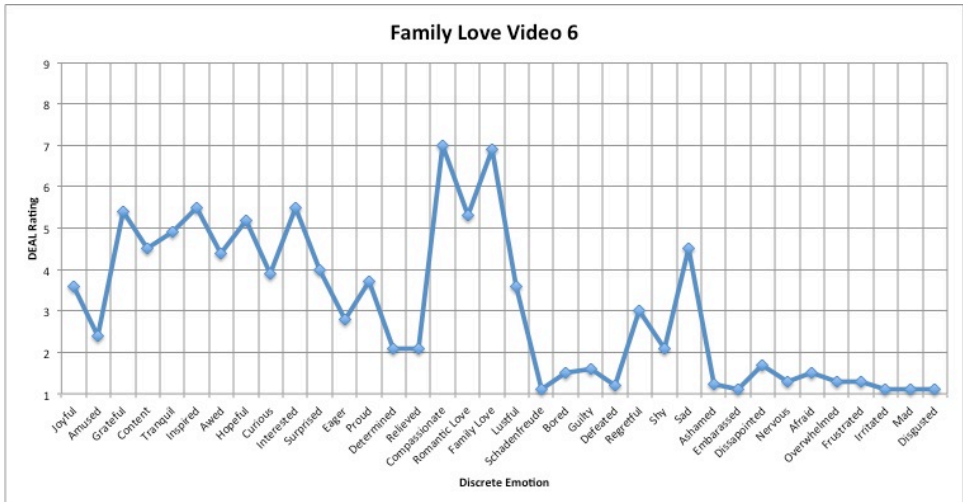
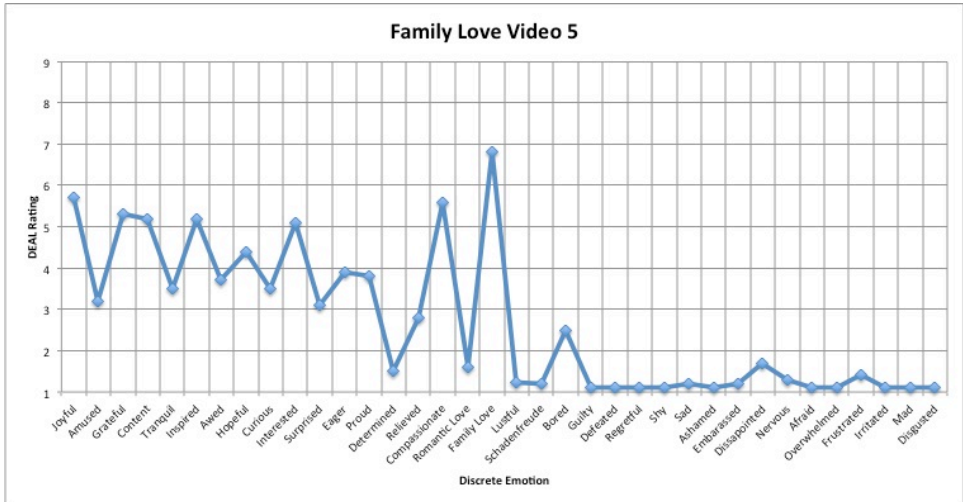


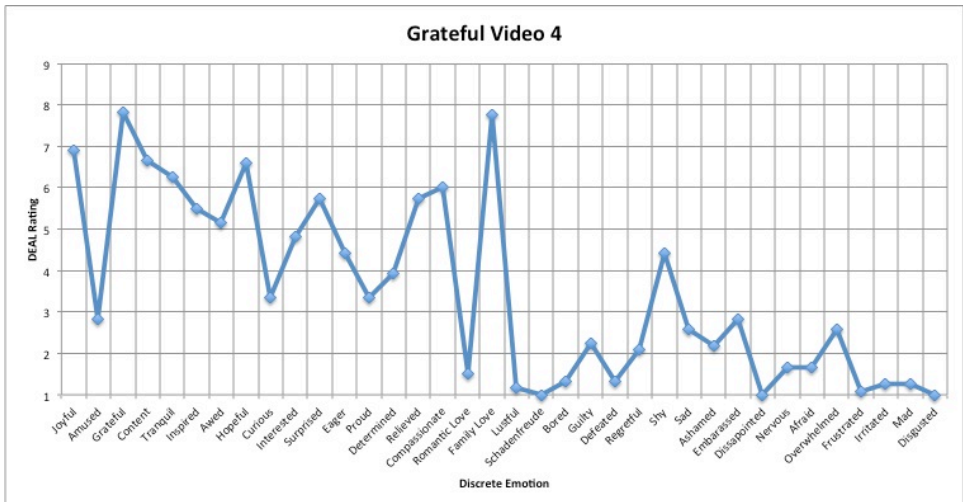
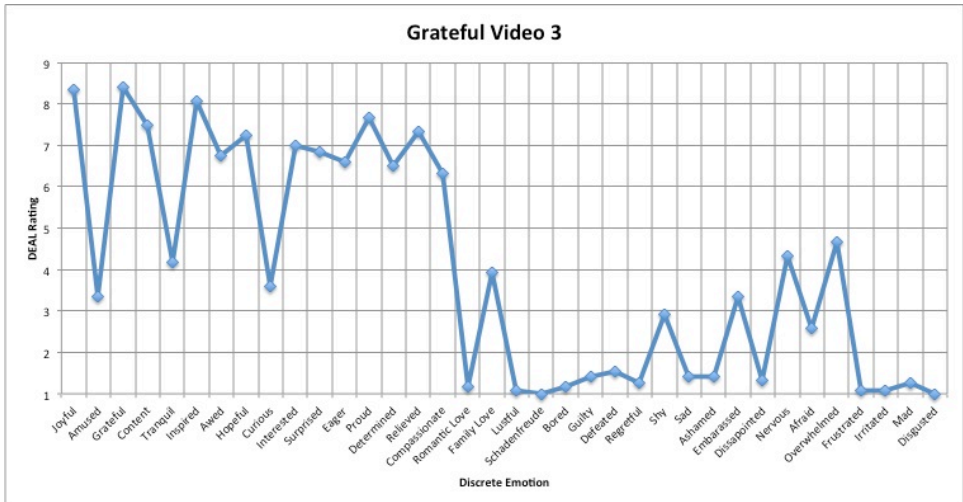
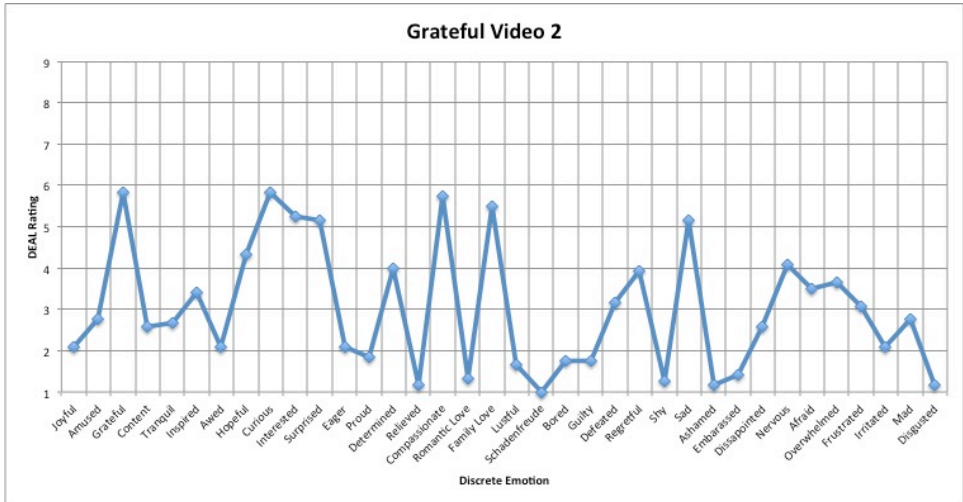


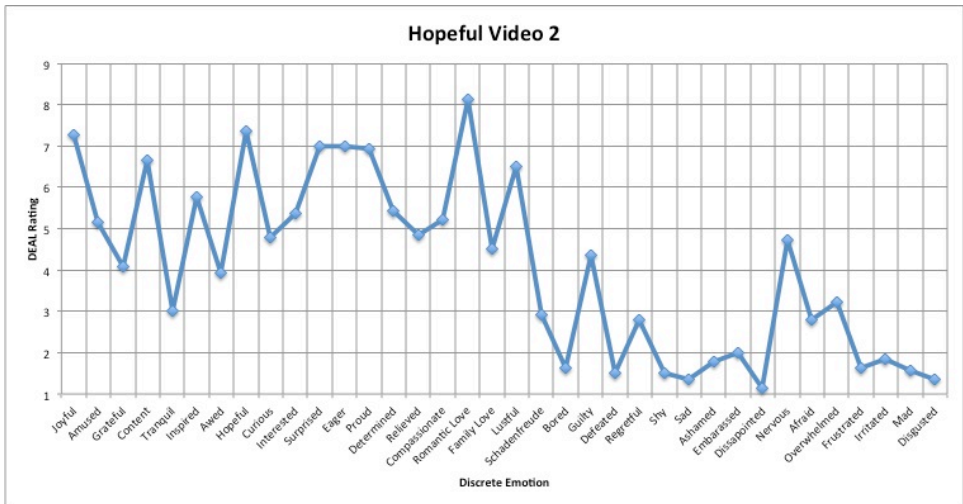
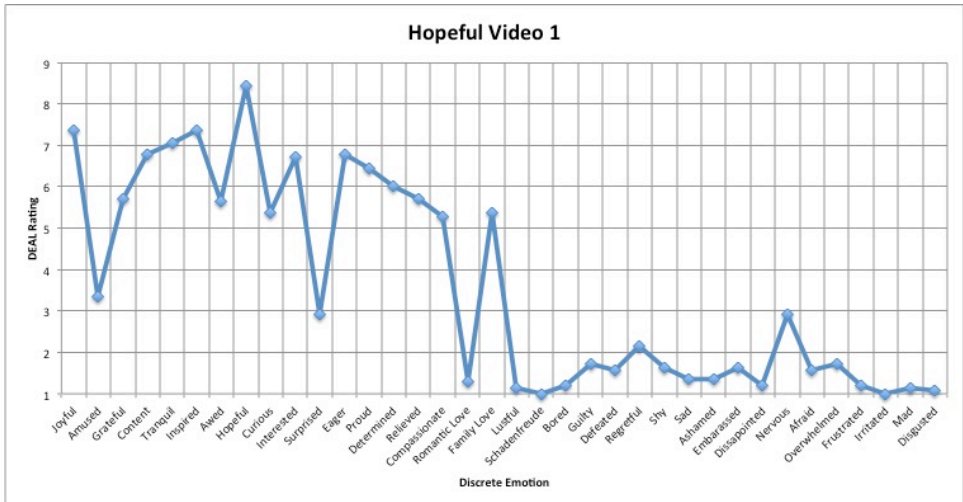
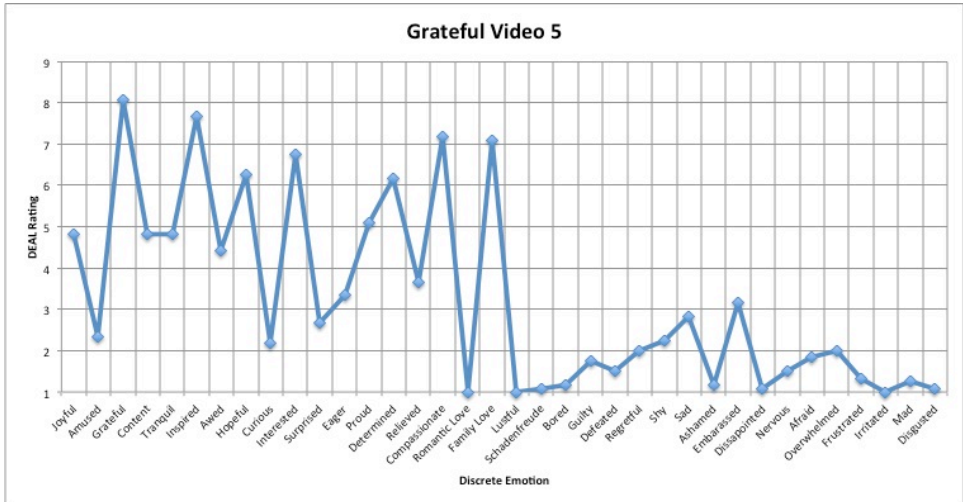


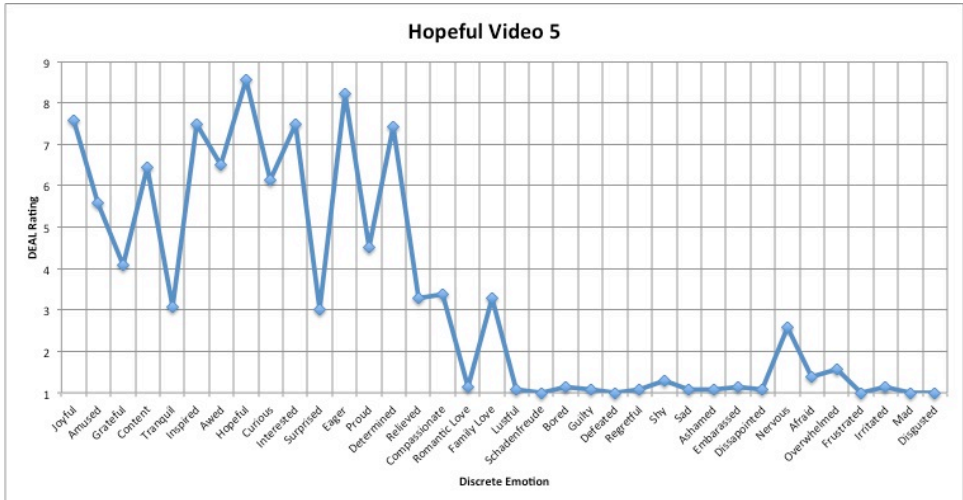
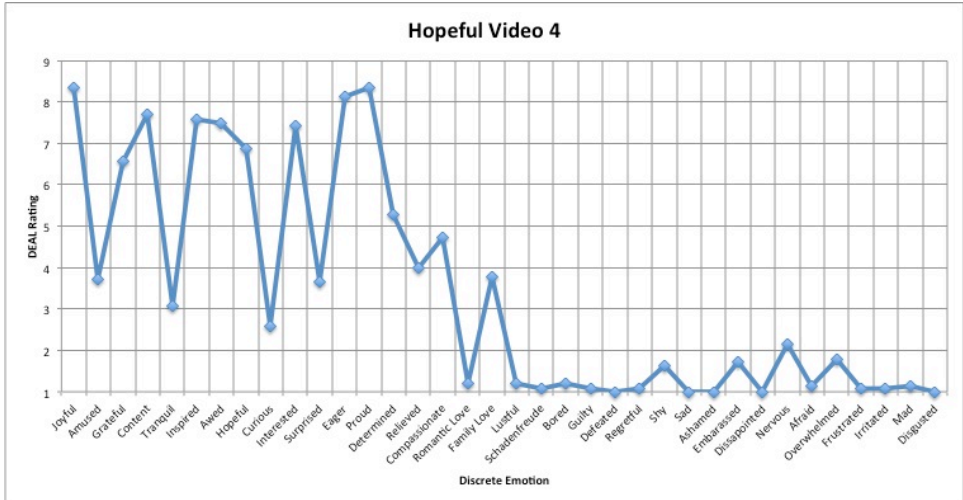
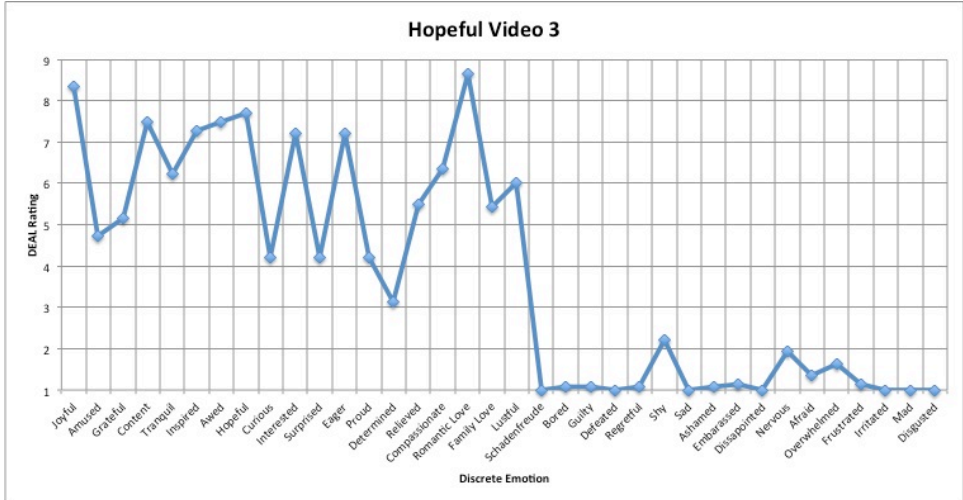


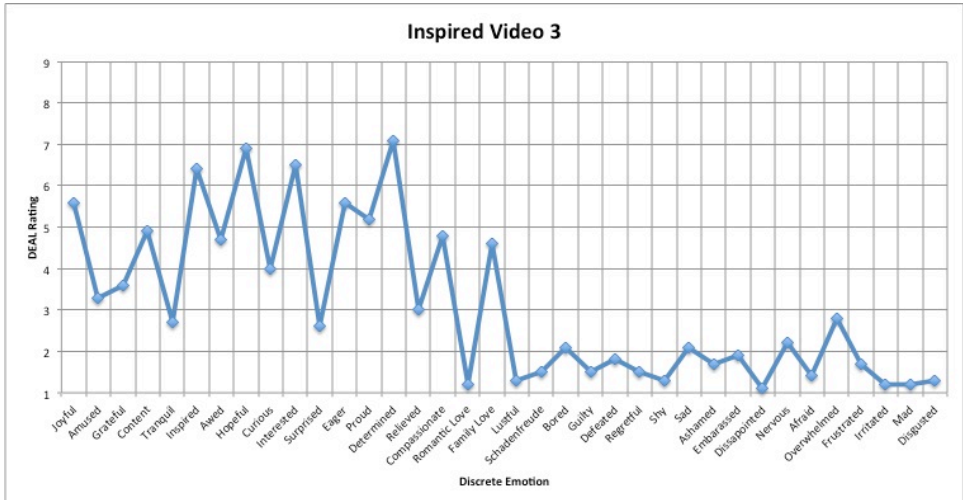
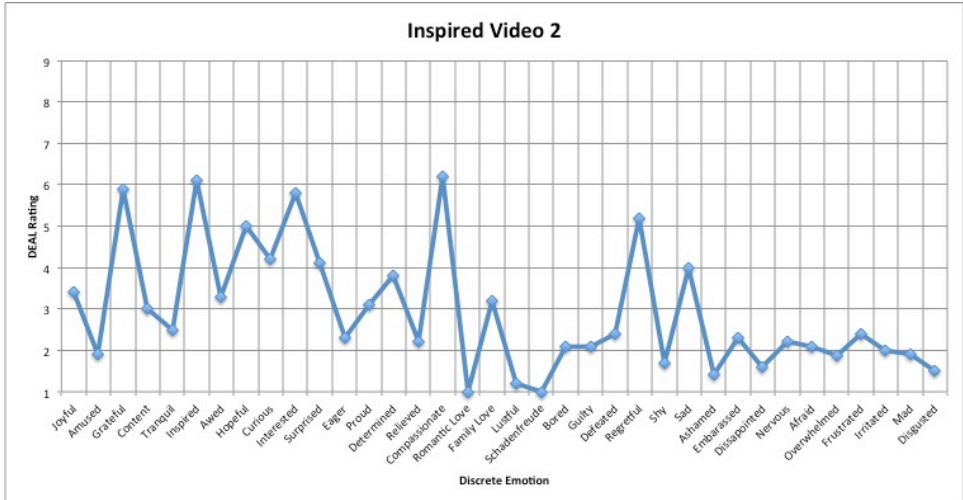
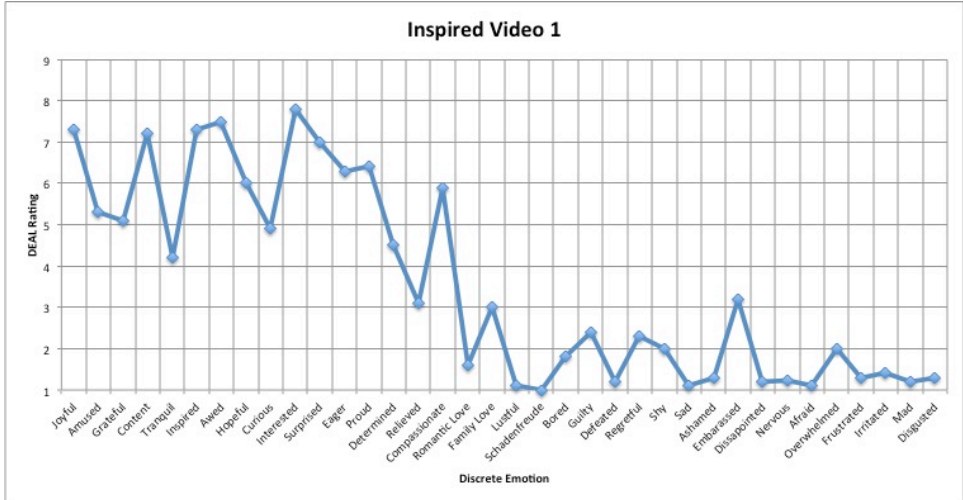


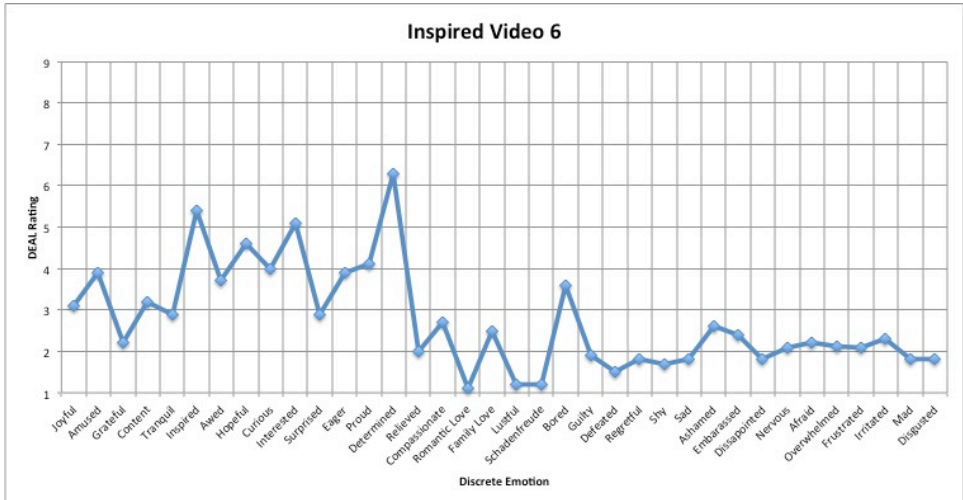
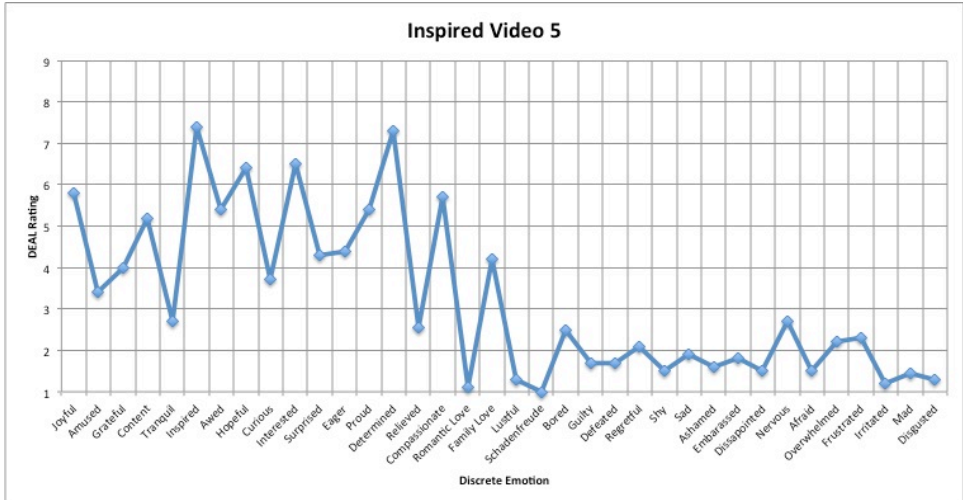
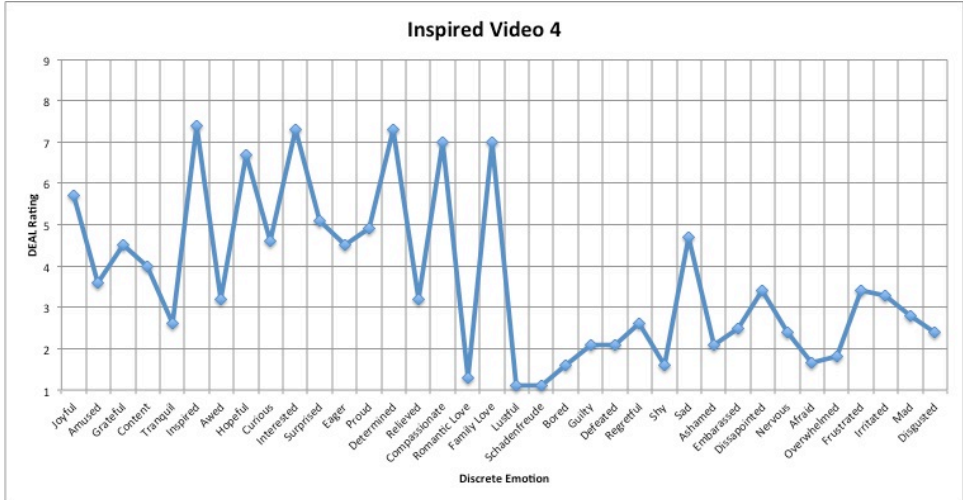


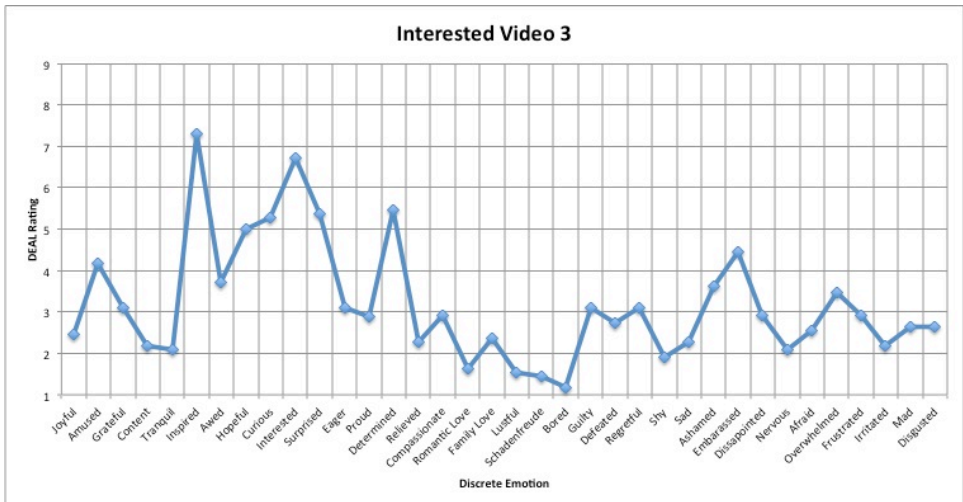
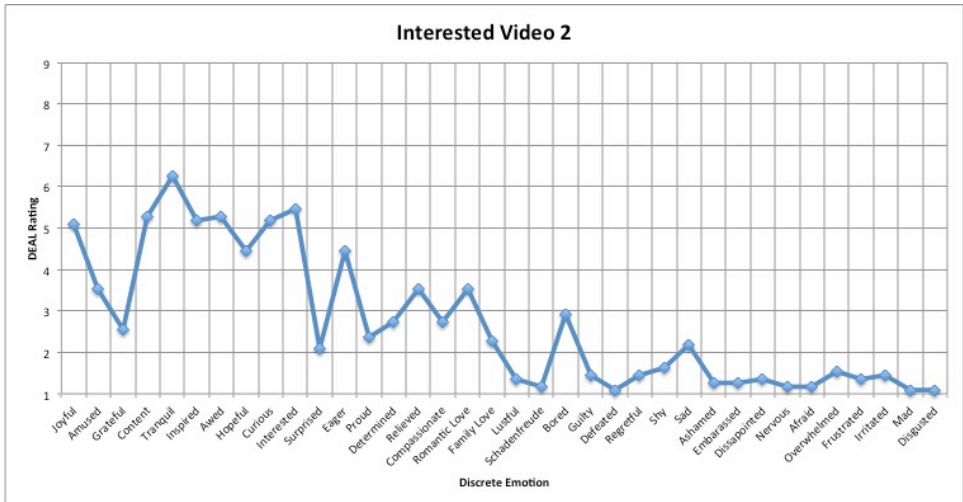
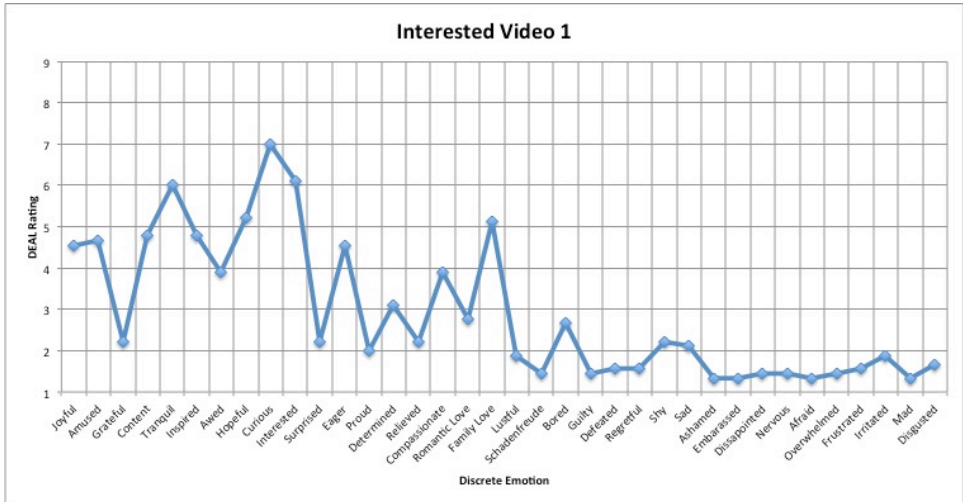


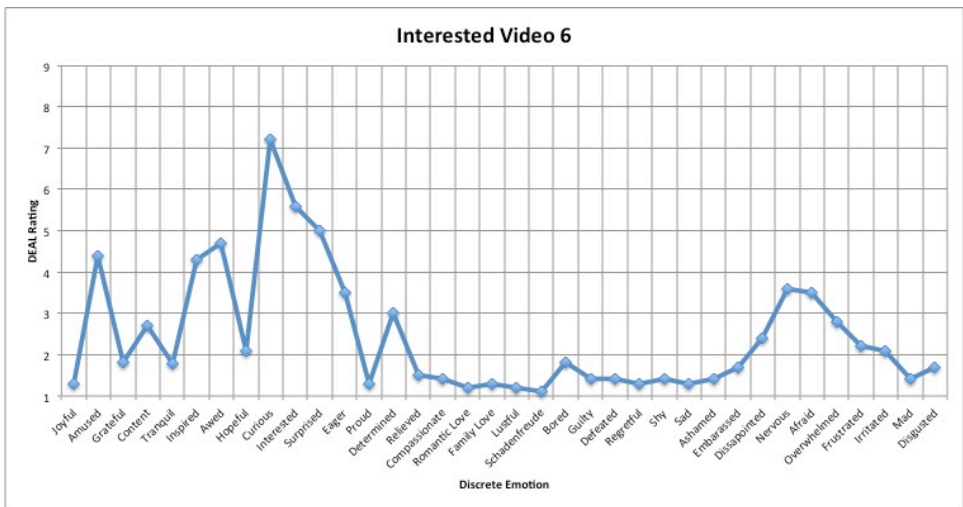
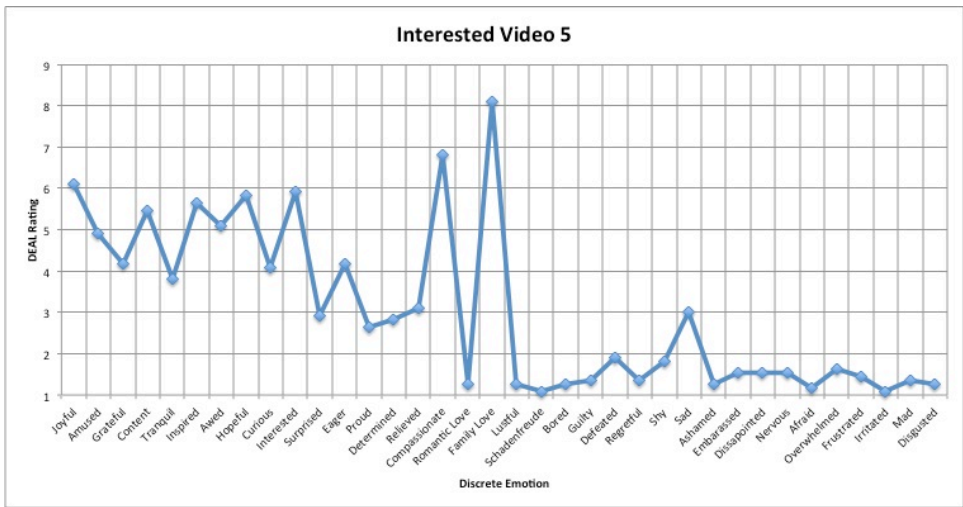
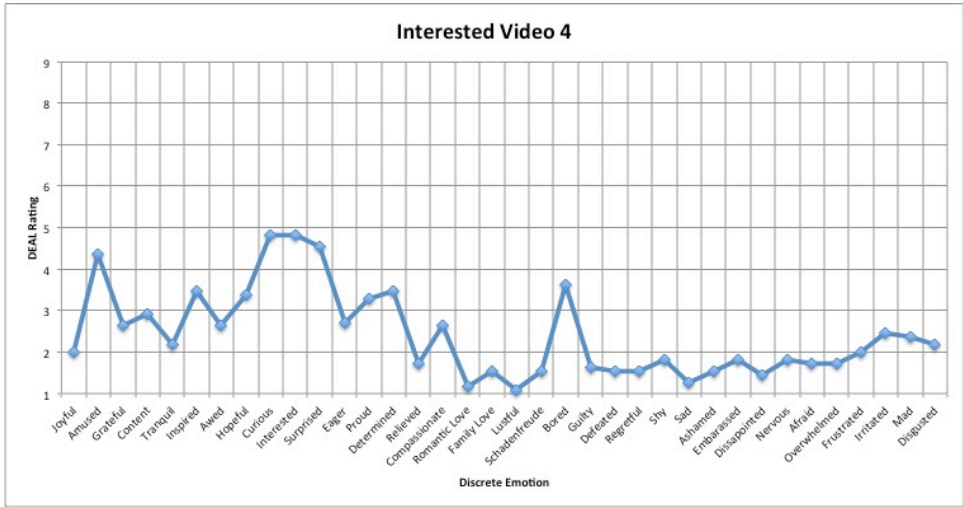


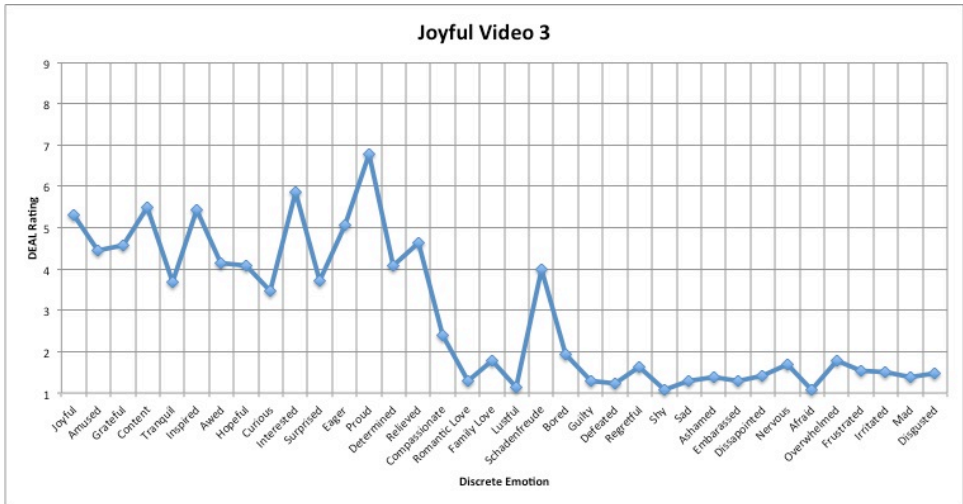
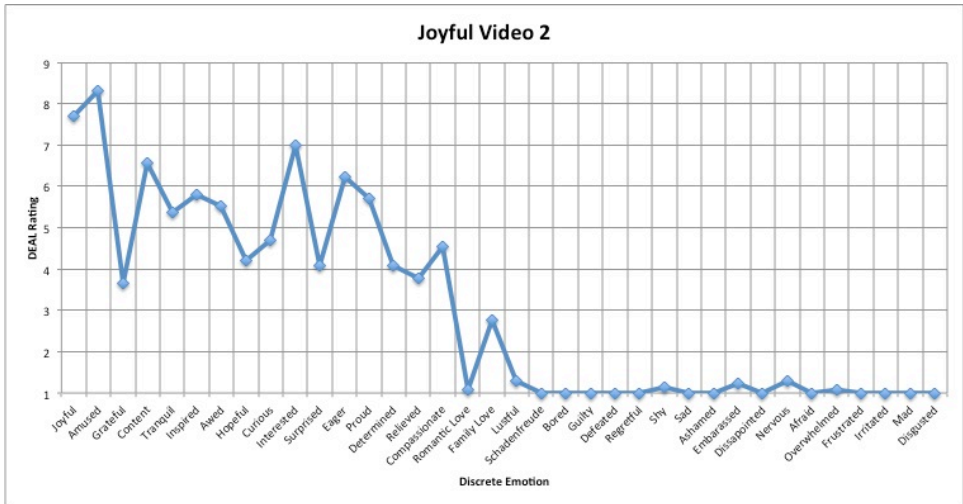
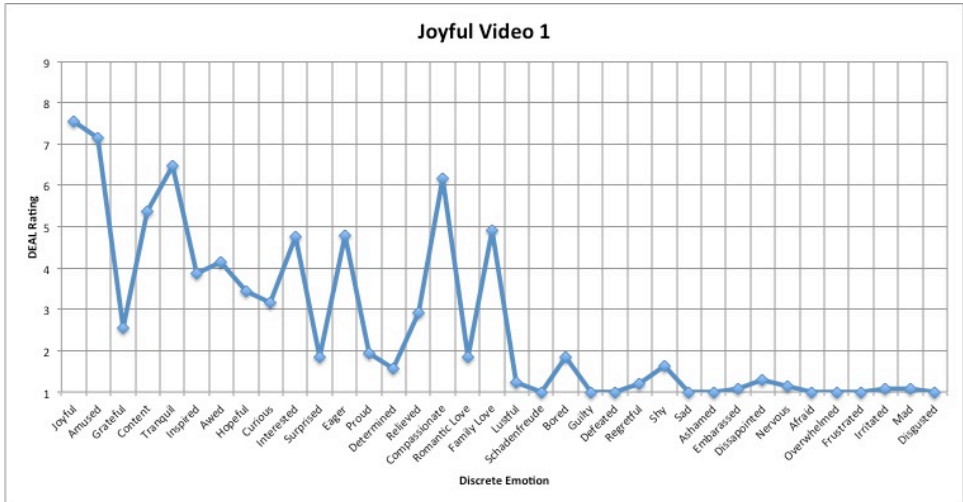


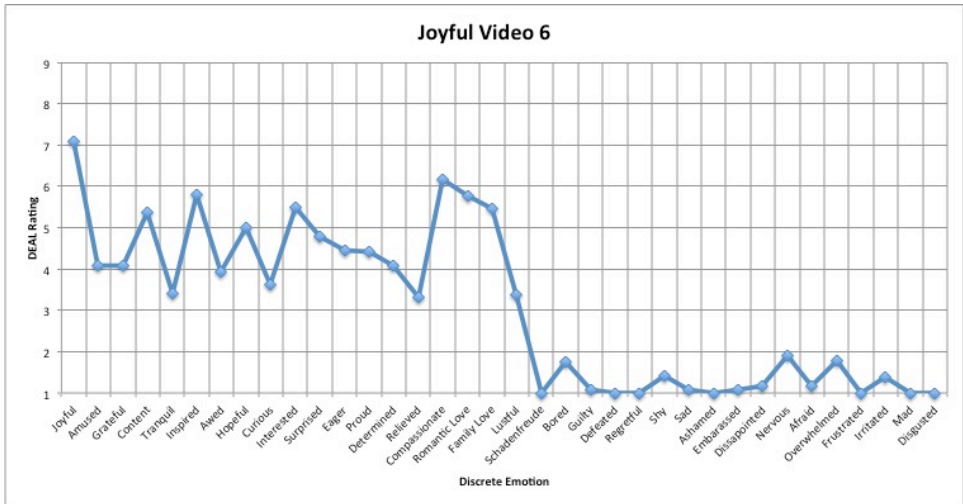
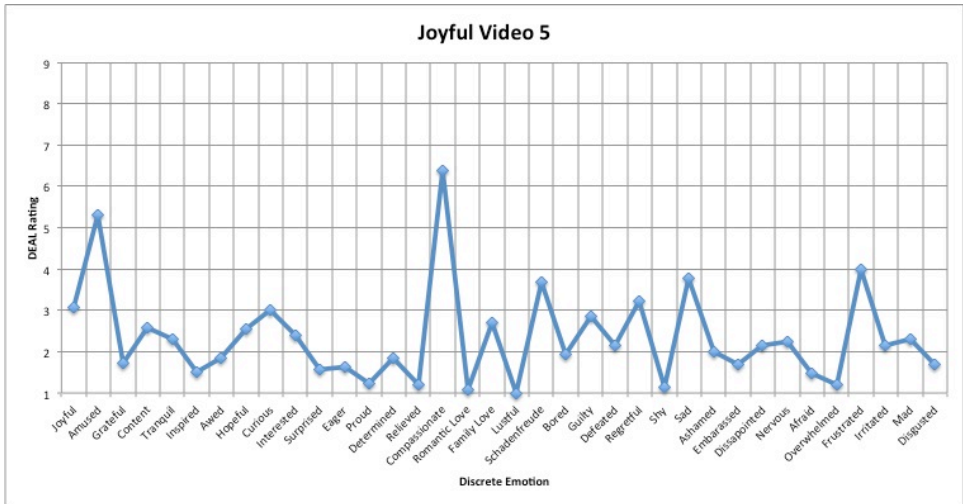
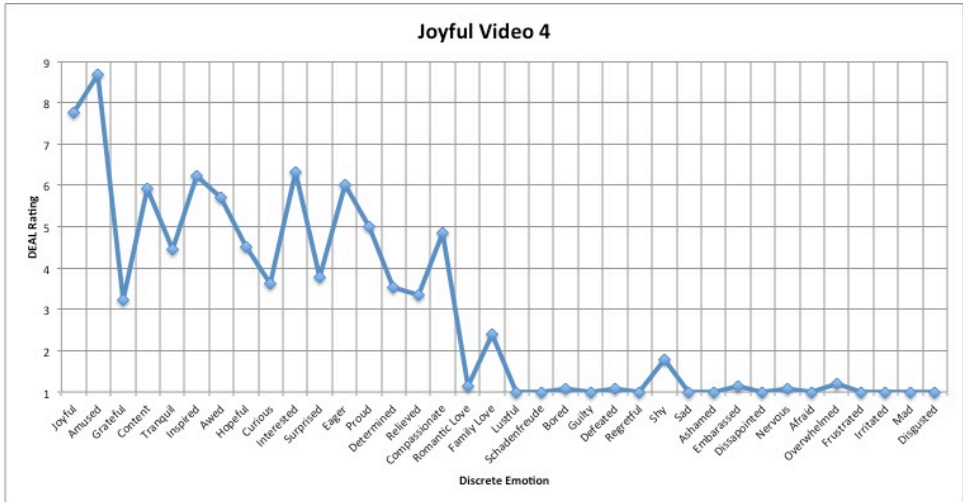


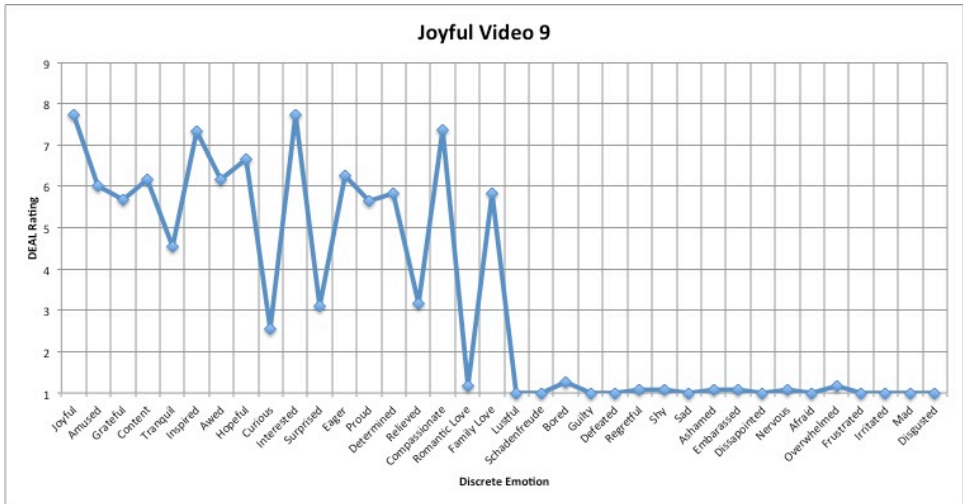
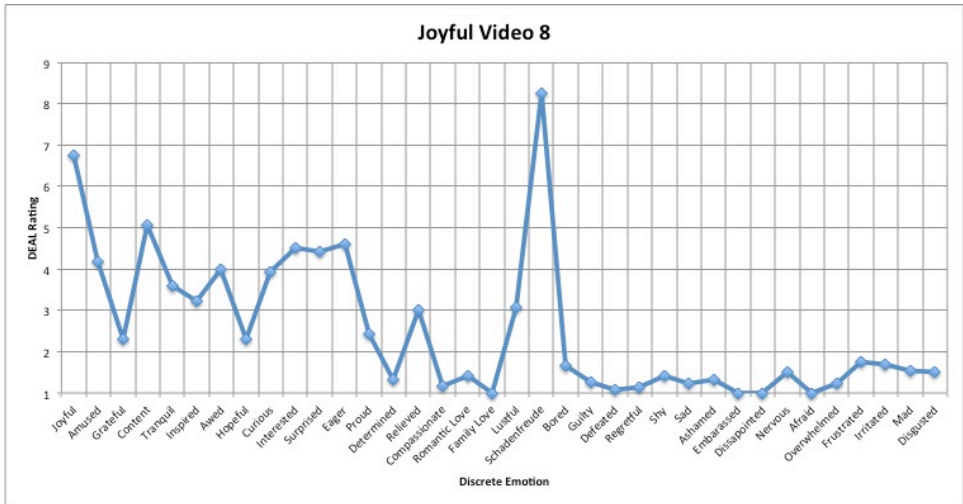
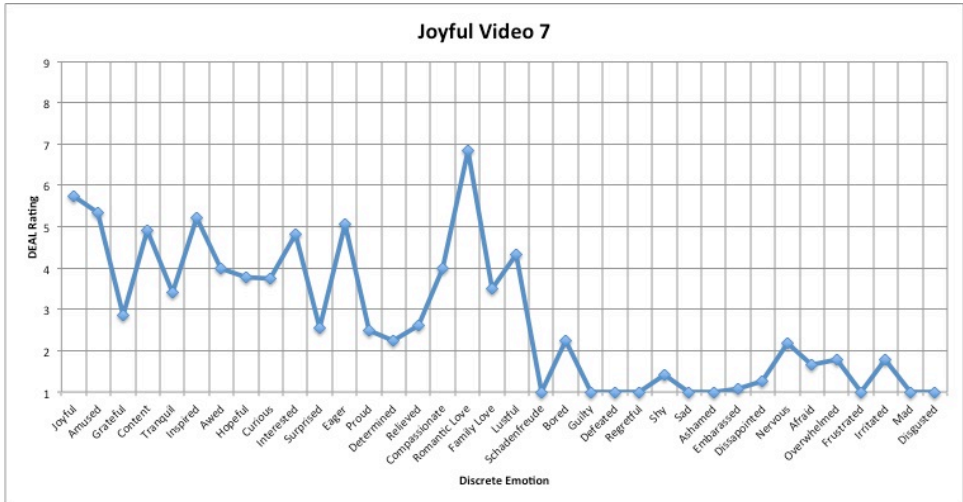


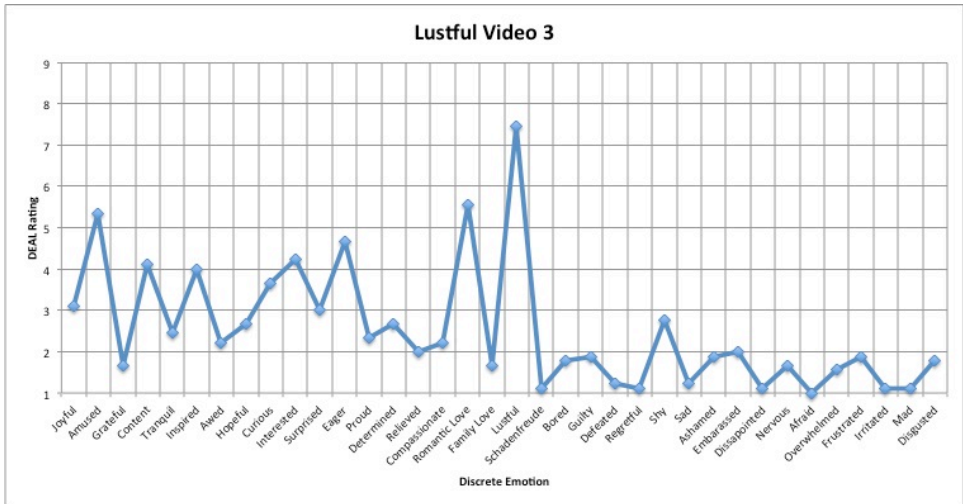
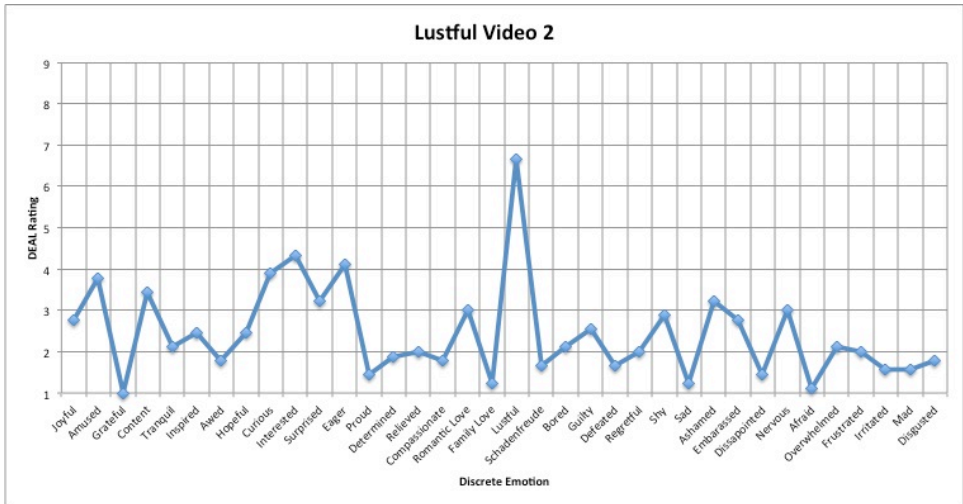
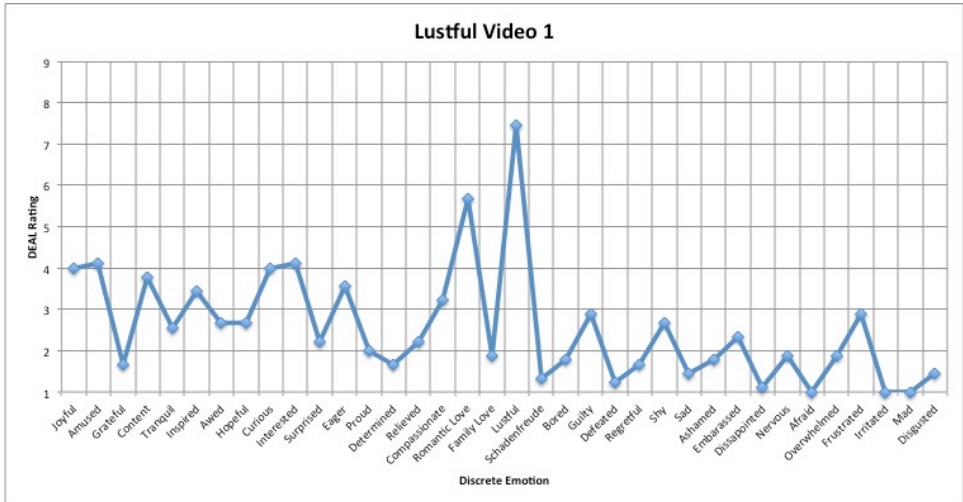


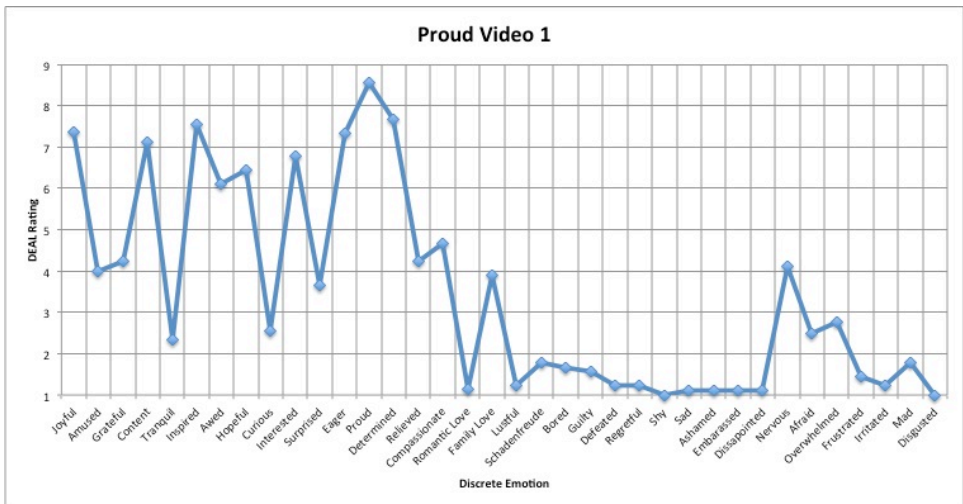
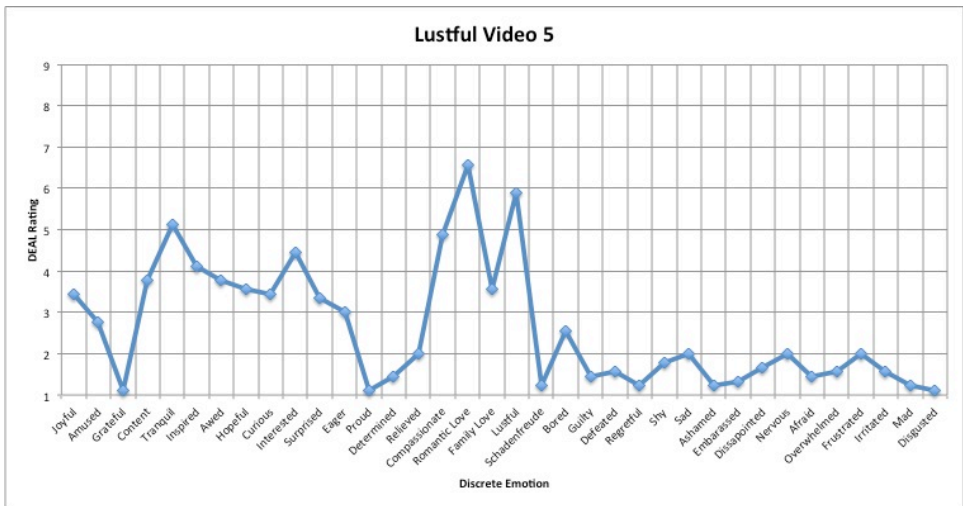
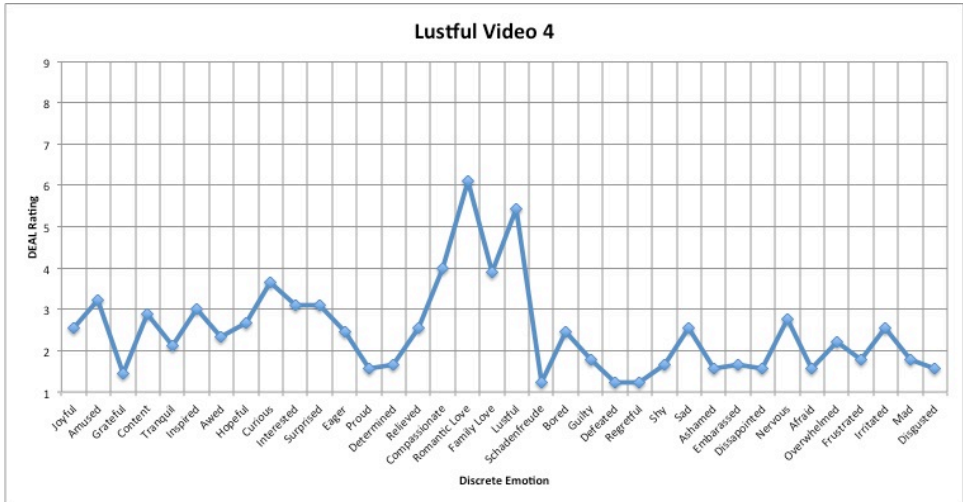


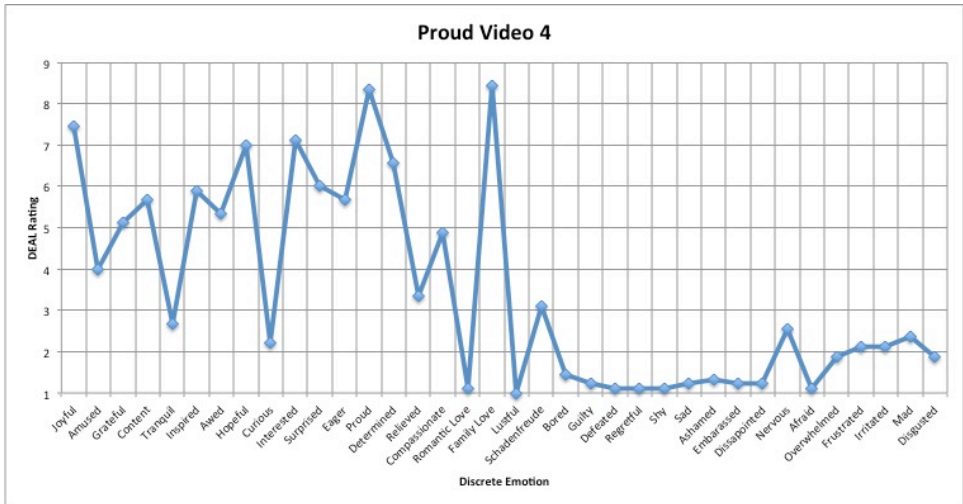
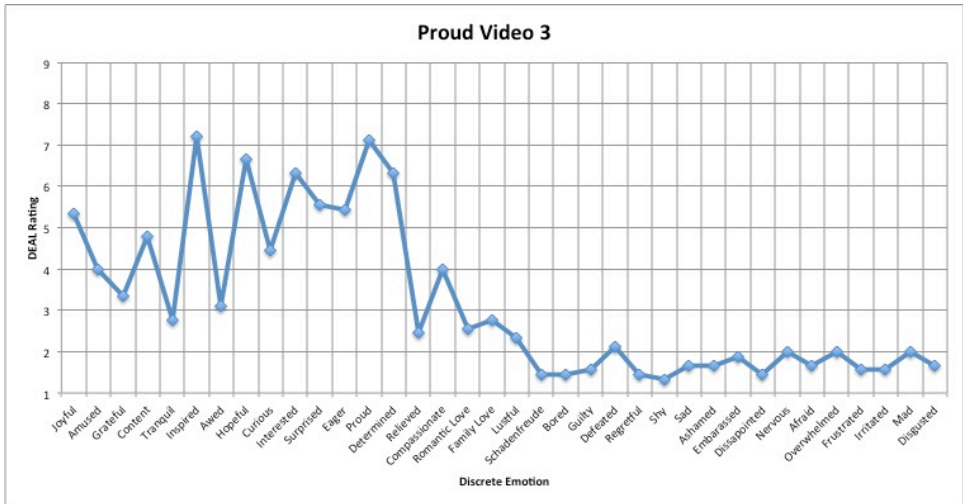
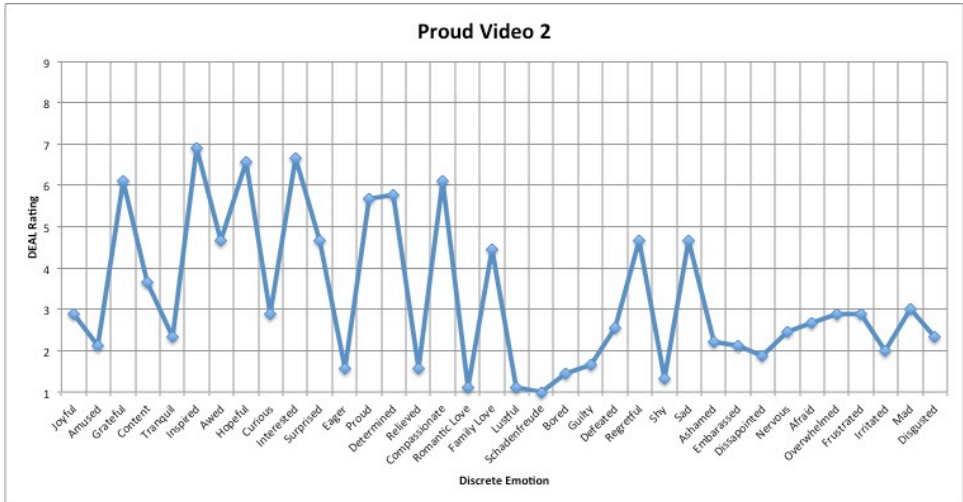


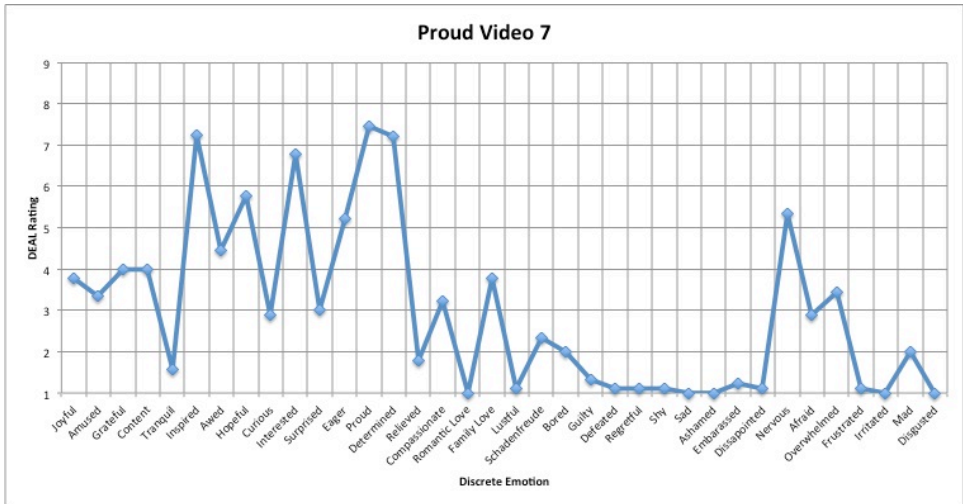
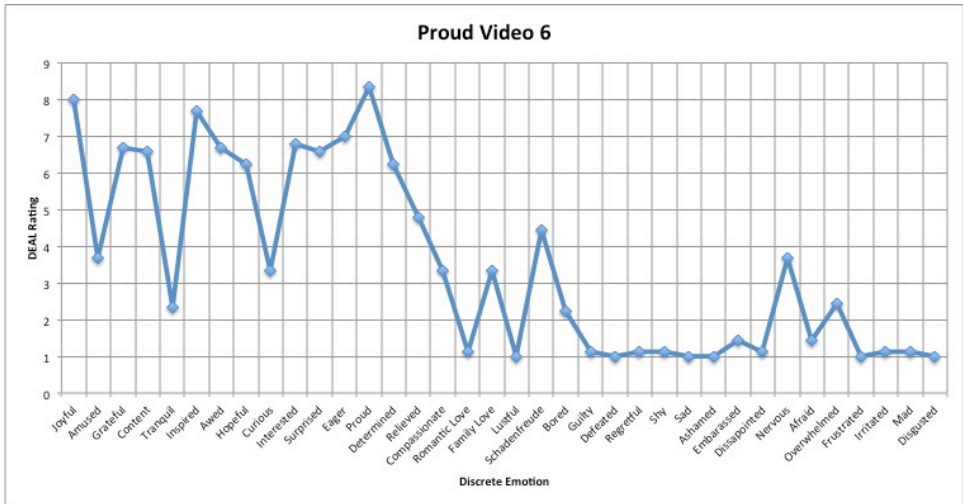
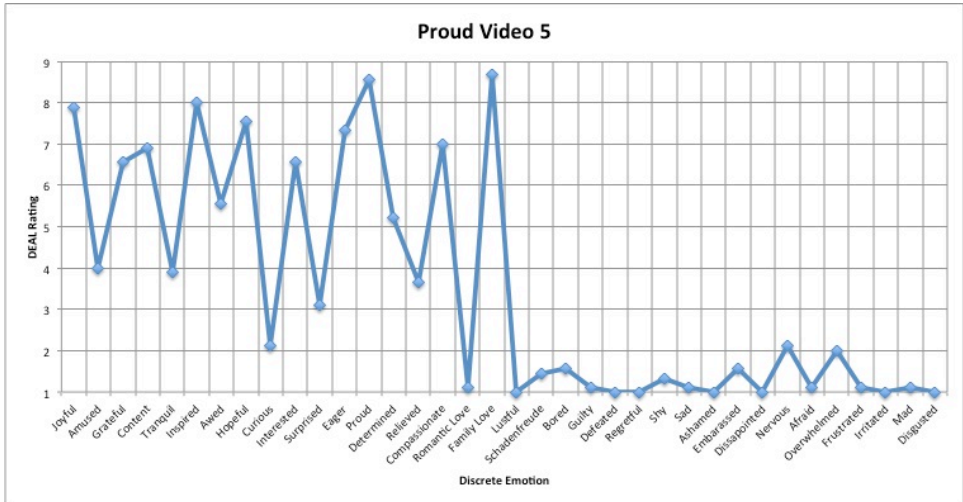


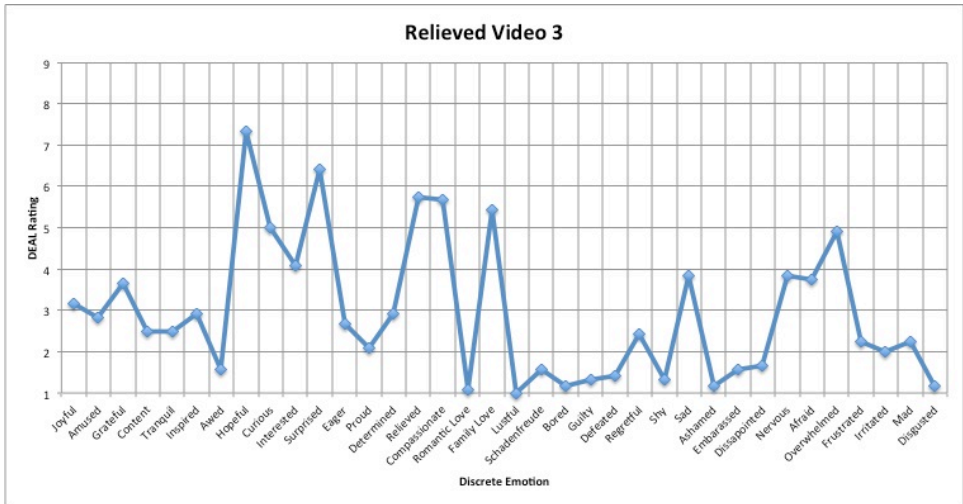
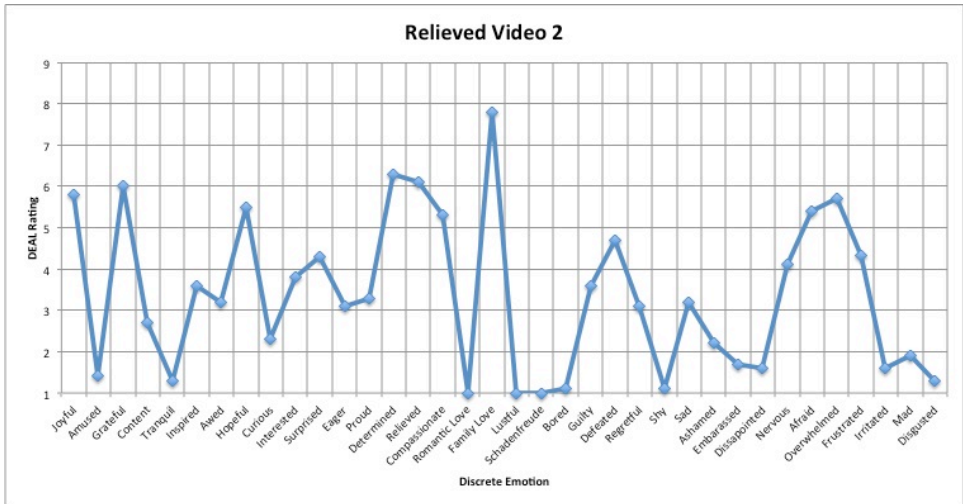
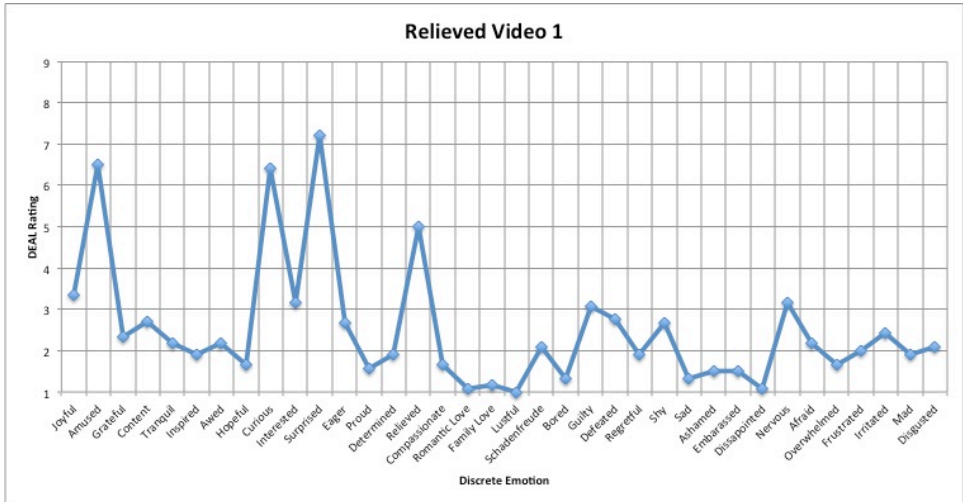


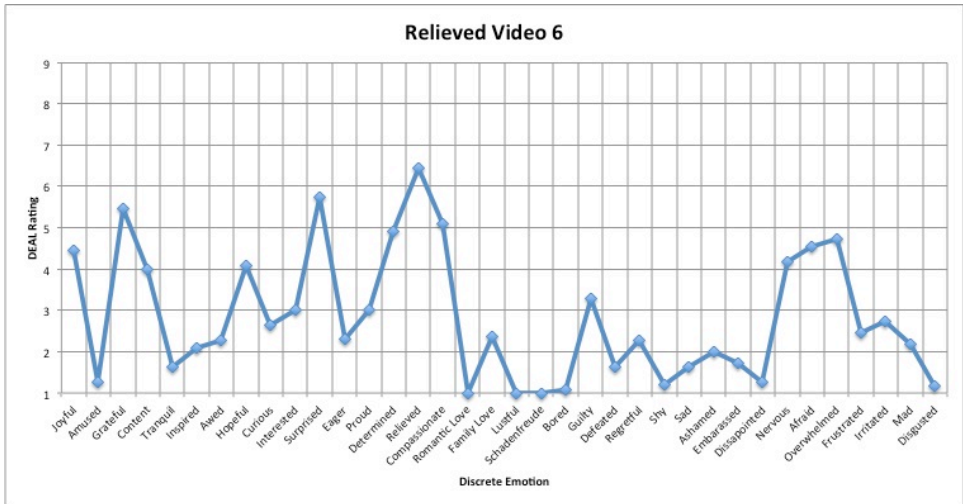
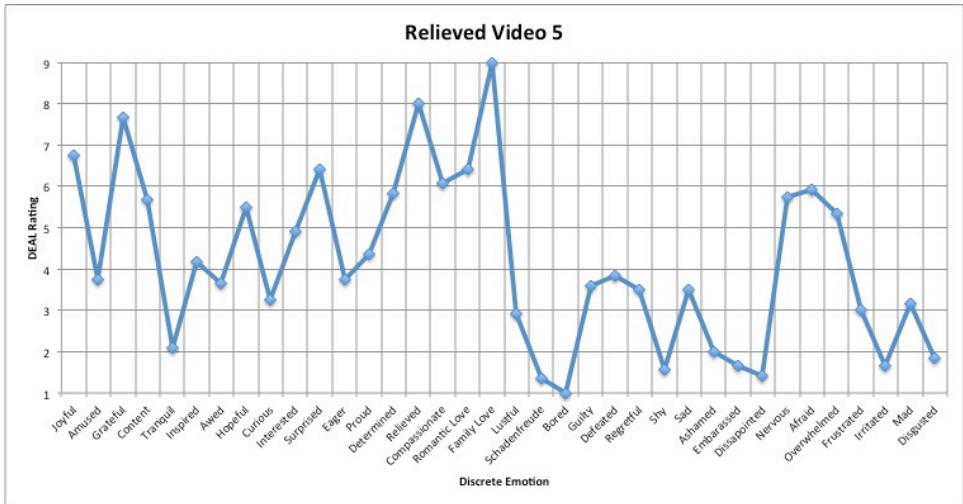
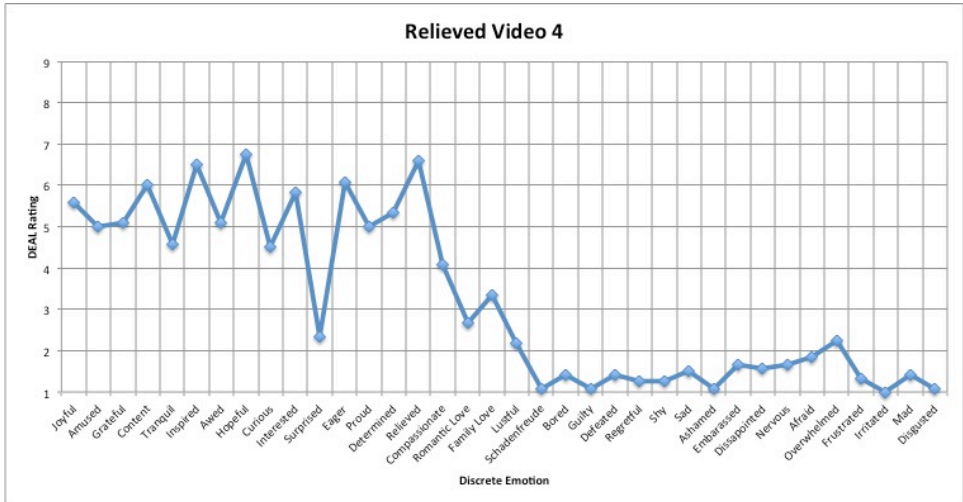


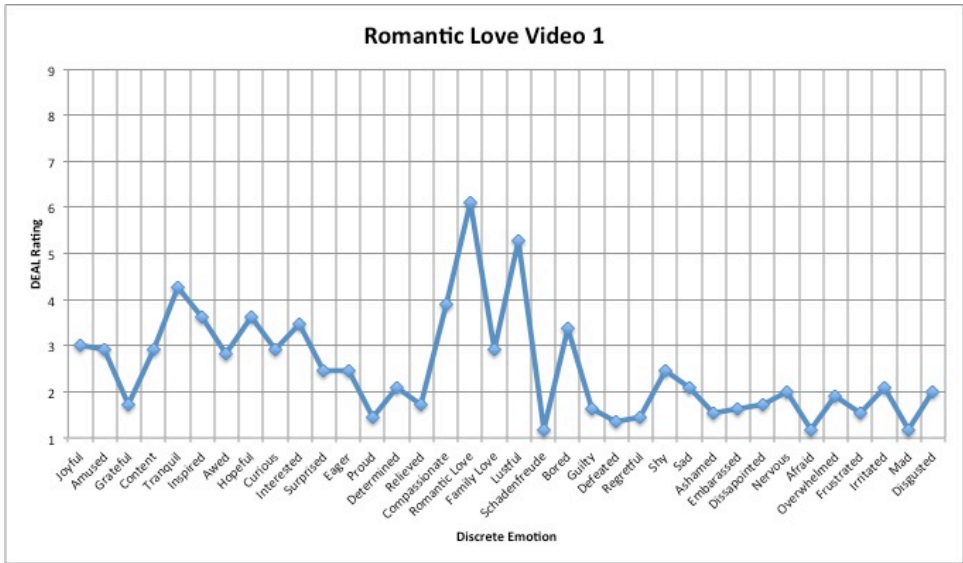
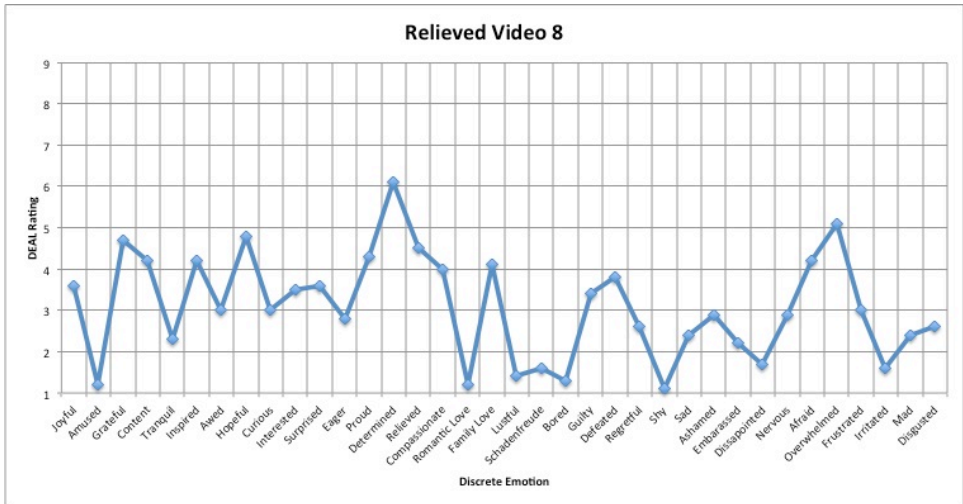
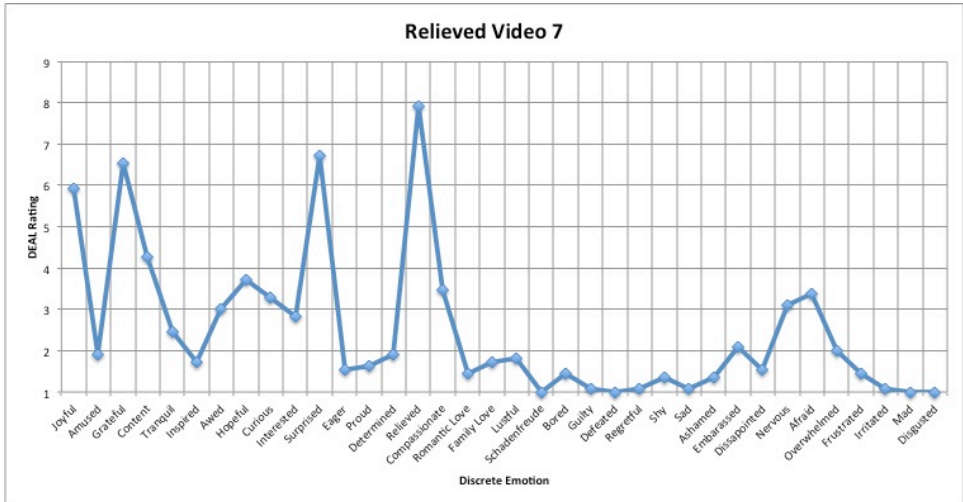


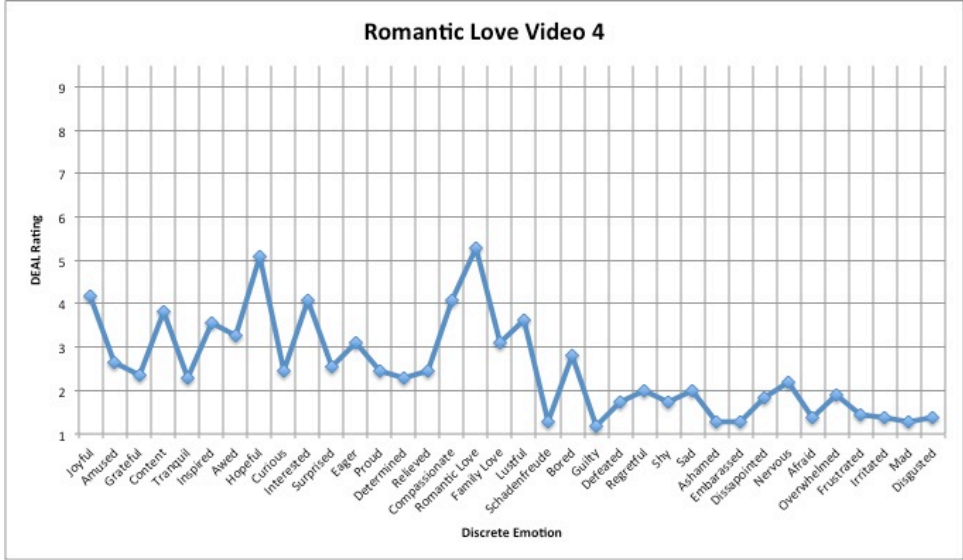
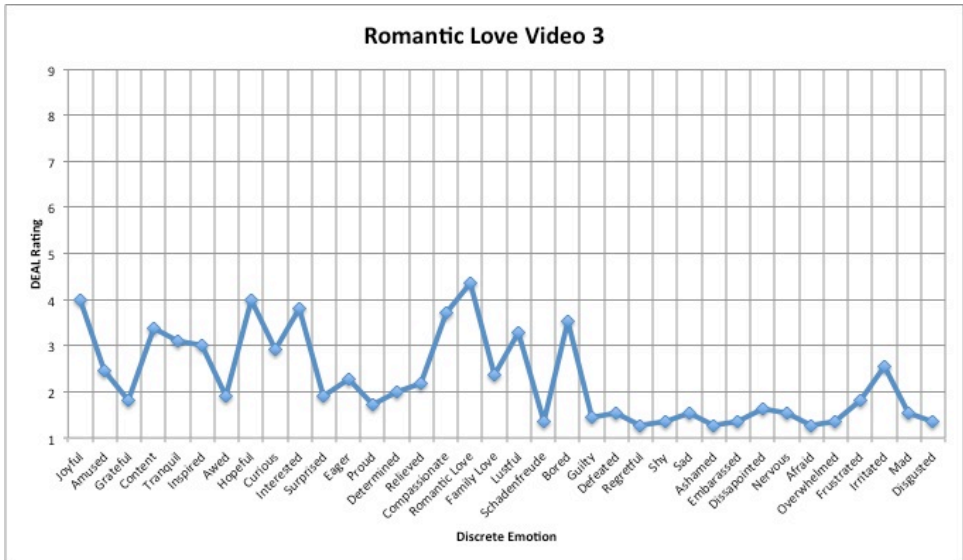
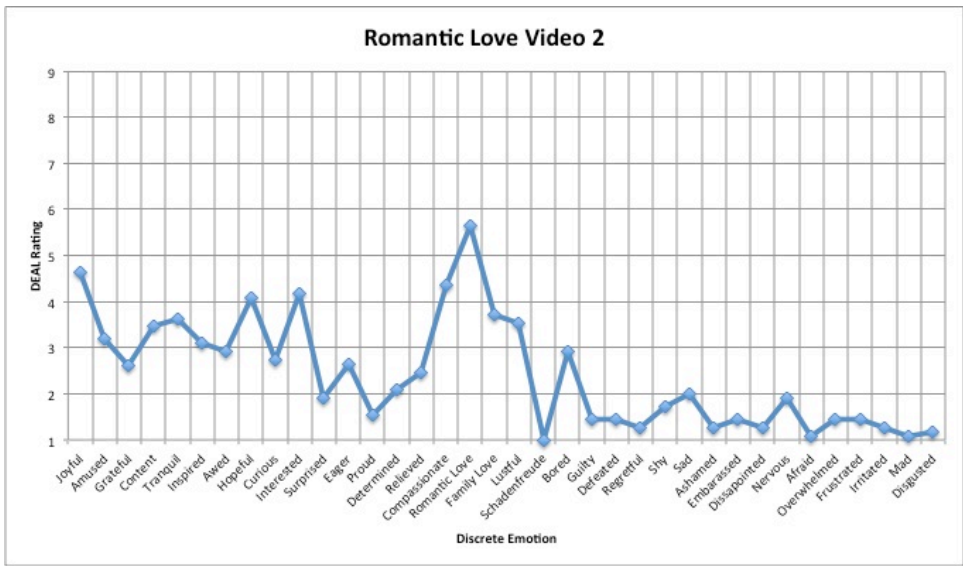


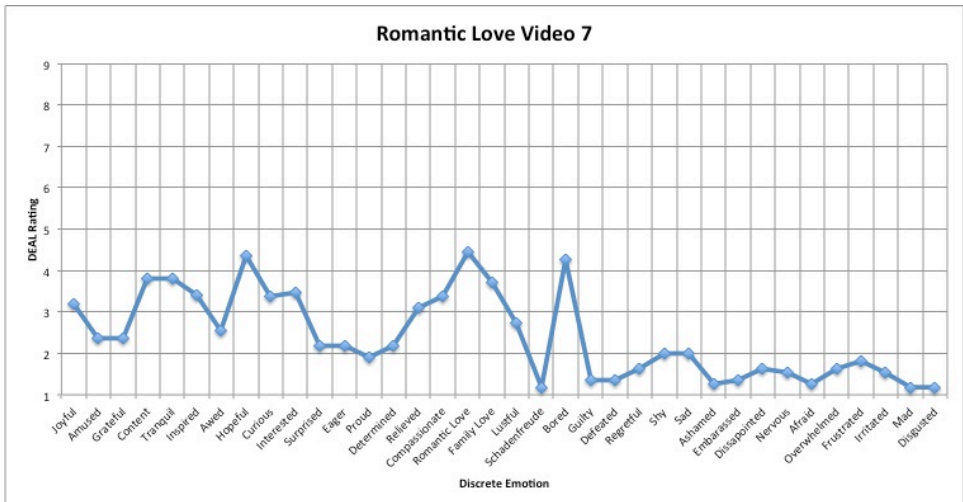
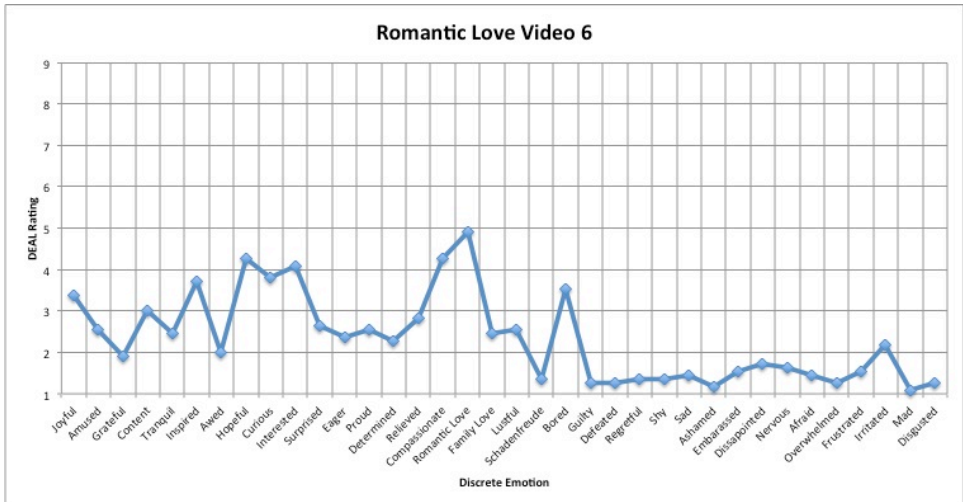
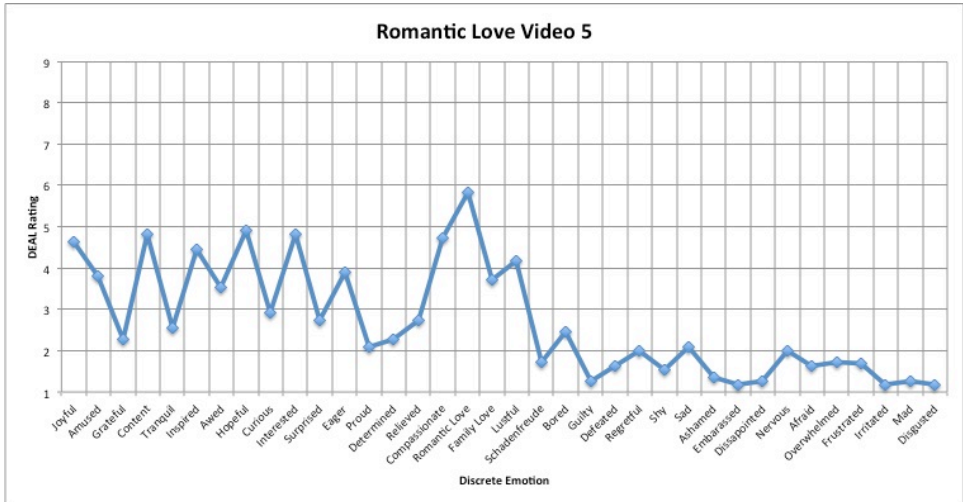


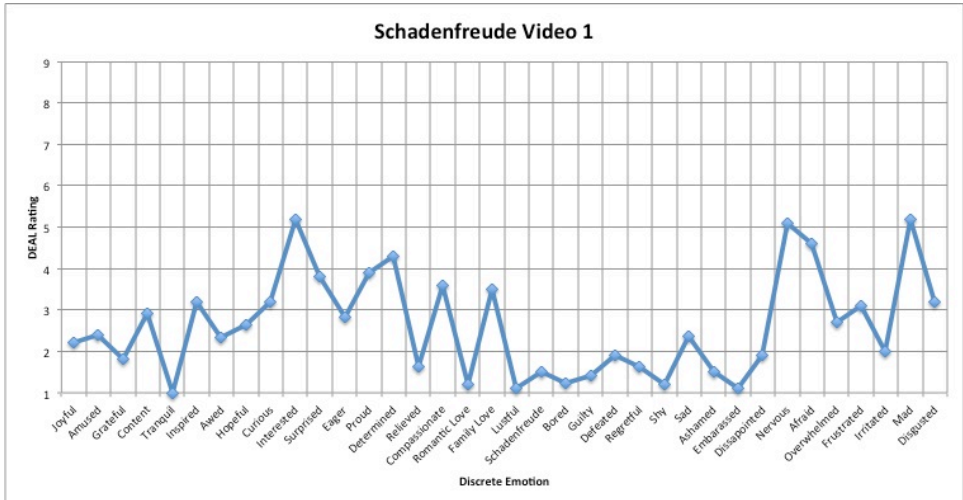
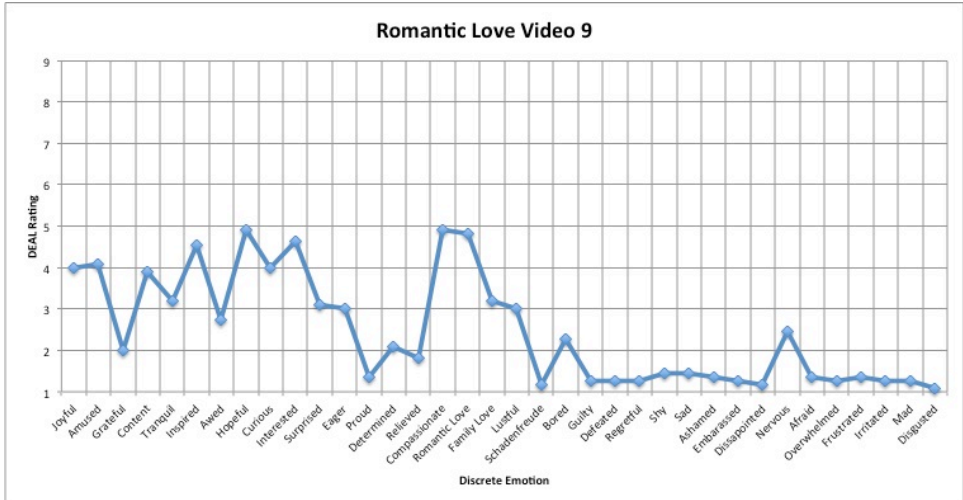
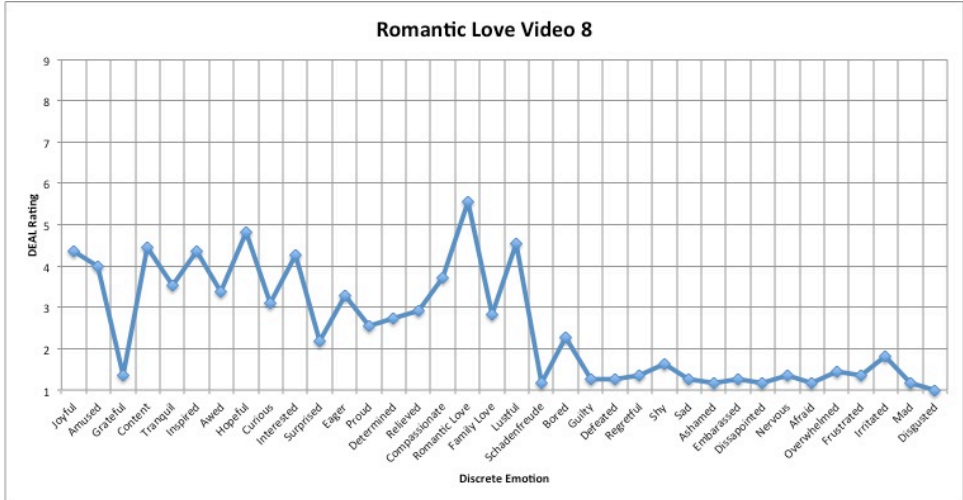


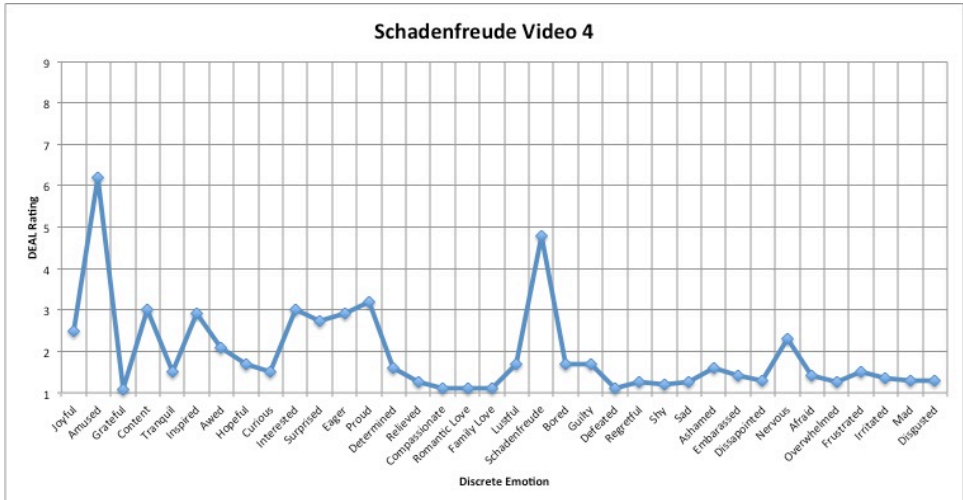
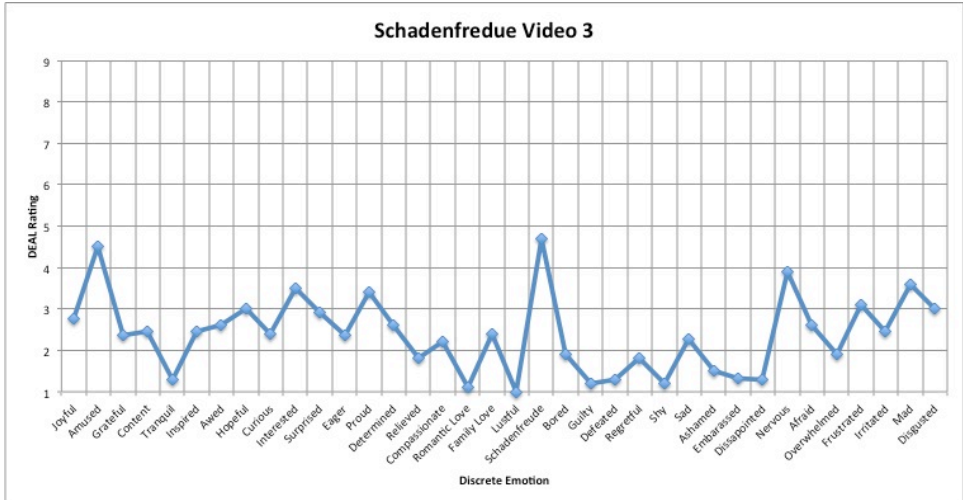
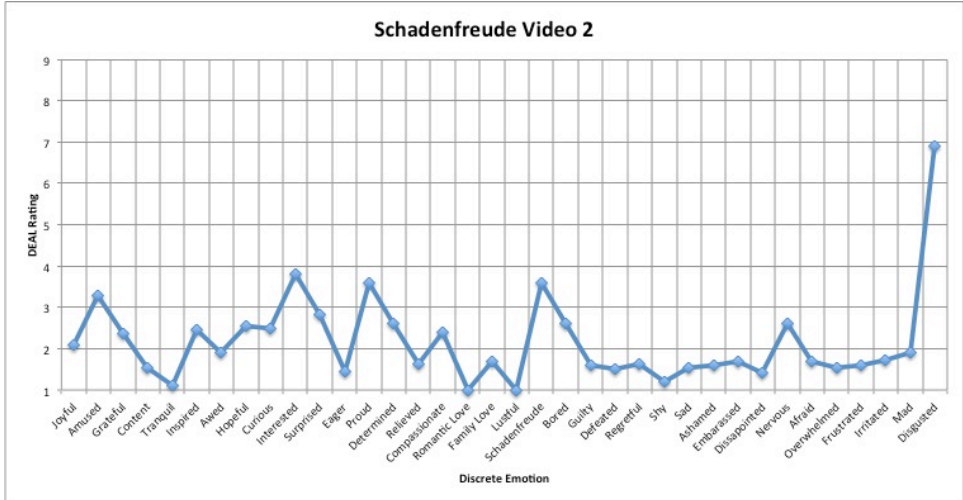


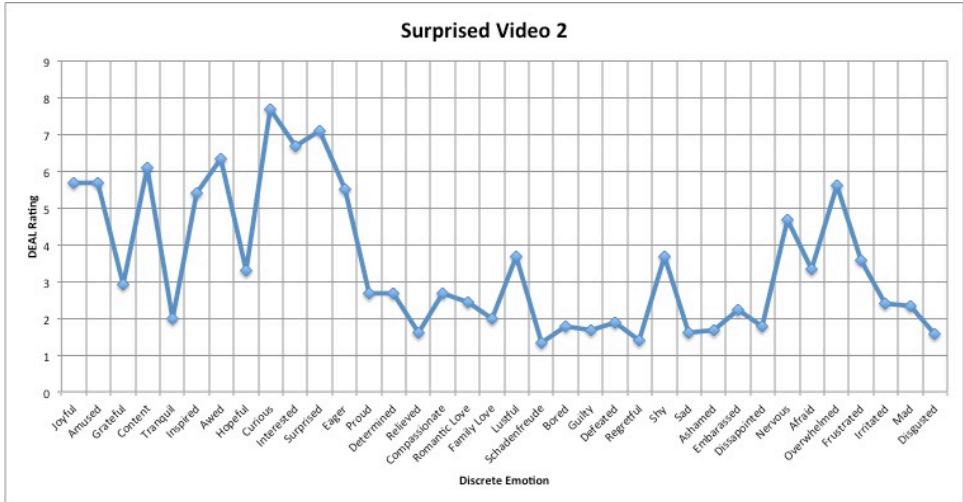
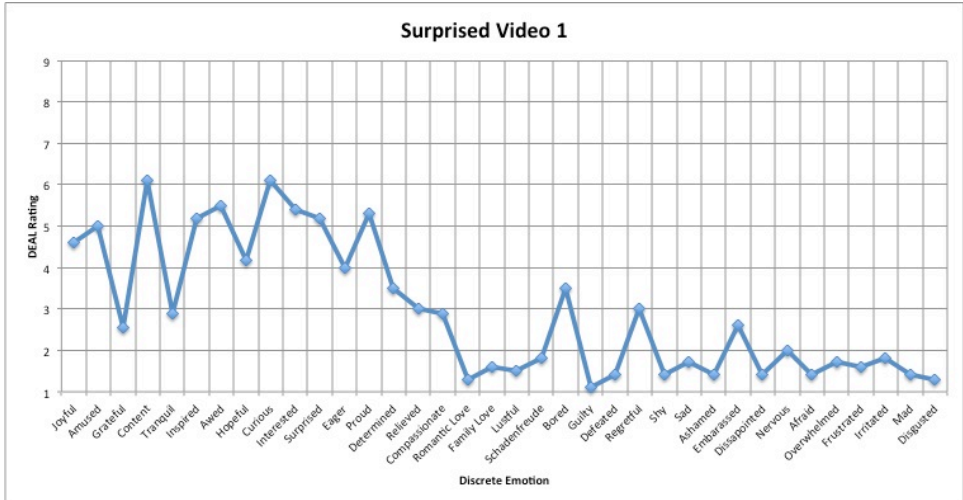
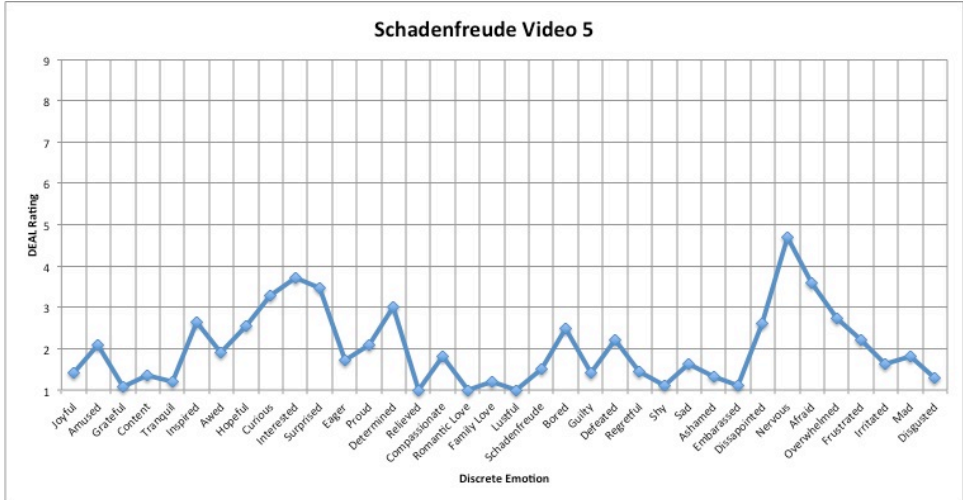


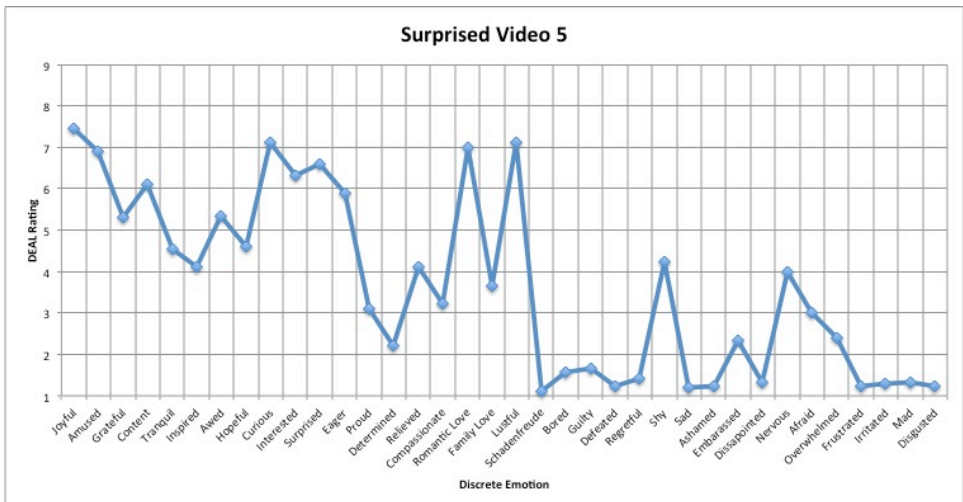
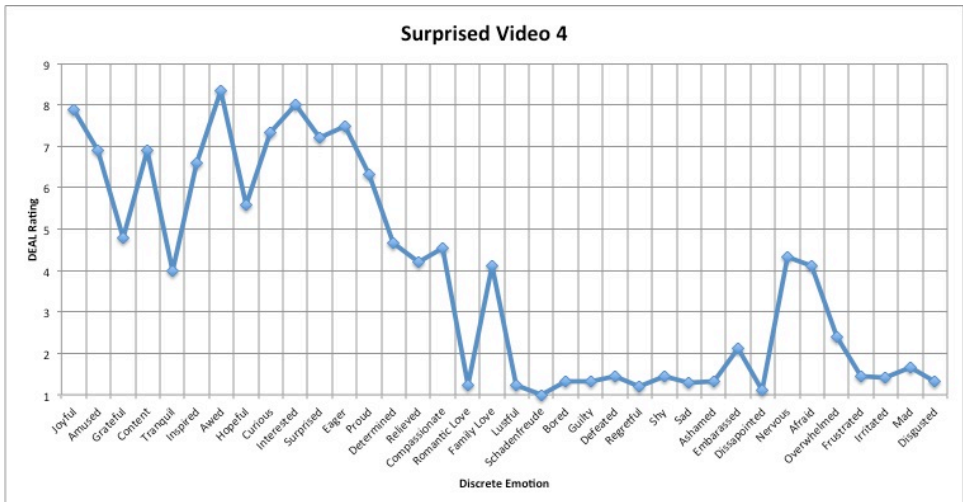
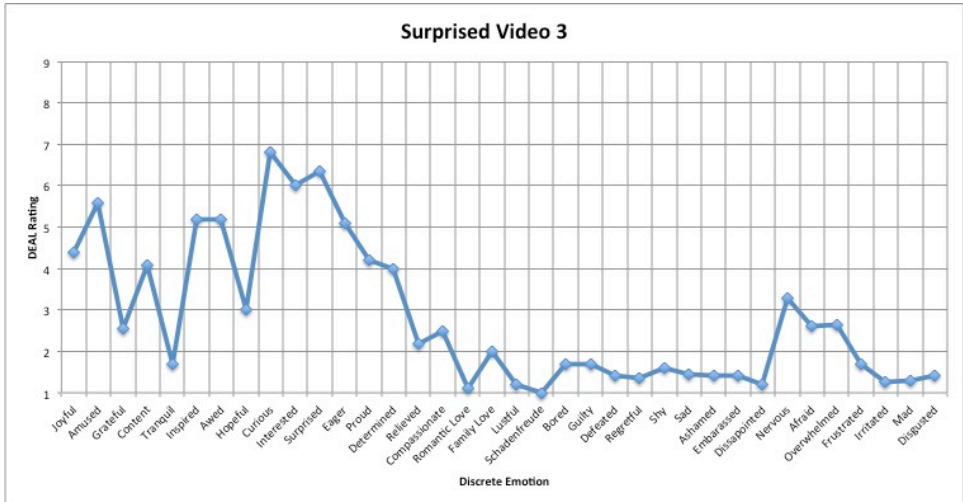


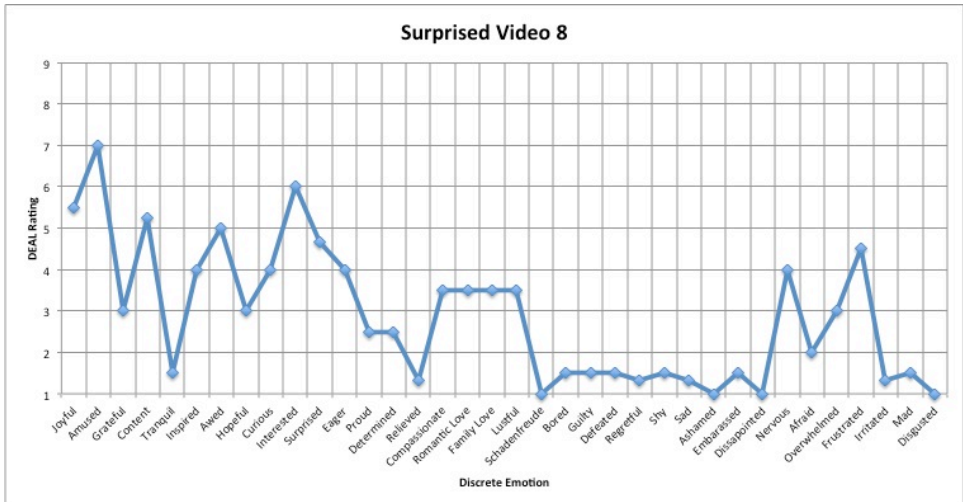
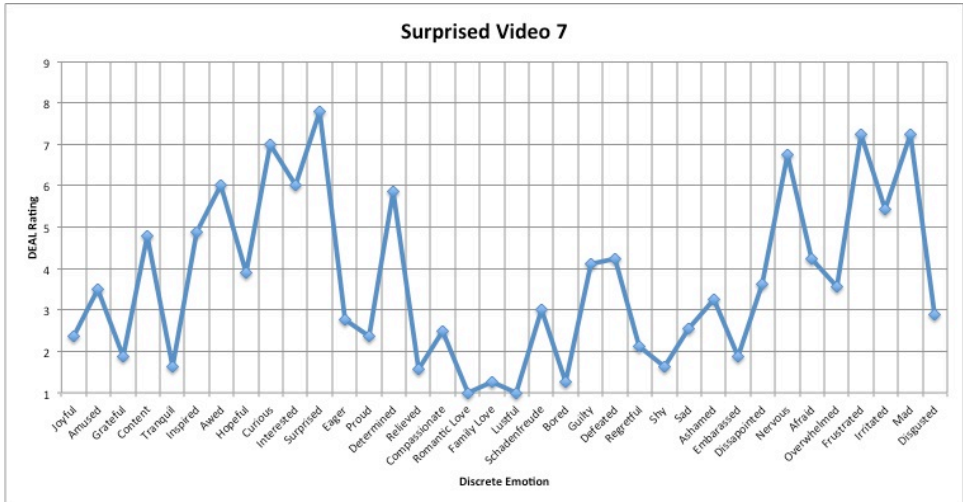
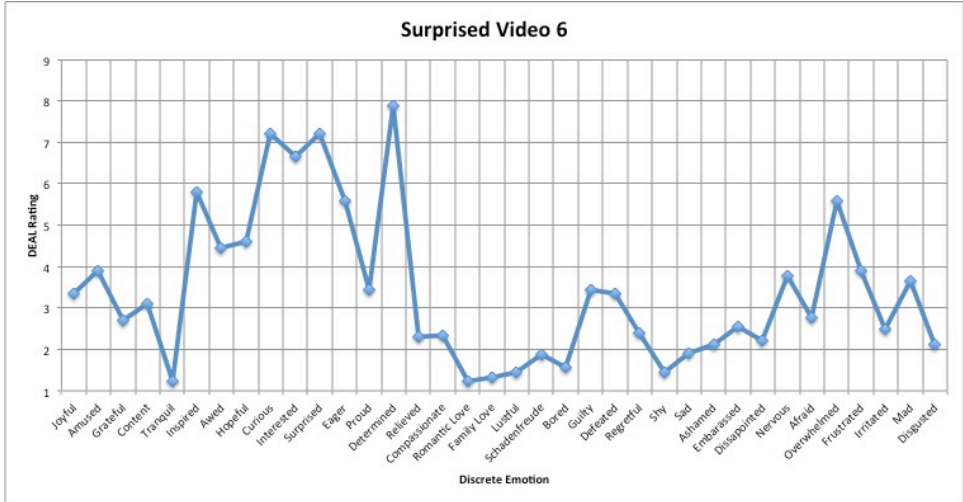












Study 2 Calculated Sums of Squares

AMUSED					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
217.31	98.05	120.68	182.75	225.51	78.23
Video 7	Video 8				
115.60	94.08				
AWED					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
367.60	211.43	277.85	184.38	269.04	364.87
CALM/TRANQUIL					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
226.02	95.02	222.45	152.84	157.64	127.79
COMPASSIONATE					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
128.19	227.76	187.87	347.23	108.32	176.31
Video 7	Video 8				
210.98	217.31				
CURIOUS					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
100.61	110.59	130.38	249.41	90.76	111.21
DETERMINED					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
277.24	223.22	266.42	211.69	258.13	344.10
Video 7	Video 8				
272.15	262.88				
FAMILY LOVE					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
177.62	361.42	228.25	224.54	182.63	240.48
GRATEFUL					
Video 1	Video 2	Video 3	Video 4	Video 5	
306.98	216.67	531.08	355.30	312.18	
HOPEFUL					
Video 1	Video 2	Video 3	Video 4	Video 5	
411.75	466.55	505.67	439.84	377.56	
INSPIRED					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
405.30	197.84	266.63	354.01	276.65	160.49

INTERESTED					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
211.02	191.96	217.38	114.85	275.74	141.96
JOYFUL					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
198.00	307.62	229.92	276.68	143.60	252.28
Video 7	Video 8	Video 9			
201.40	167.31	379.61			
LUSTFUL					
Video 1	Video 2	Video 3	Video 4	Video 5	
115.85	93.95	122.98	113.98	156.49	
PRIDE					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
375.24	292.85	265.84	376.96	442.89	406.30
Video 7					
250.73					
RELIEVED					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
161.76	309.82	224.81	298.97	465.88	181.05
Video 7	Video 8				
145.05	220.97				
ROMANTIC LOVE					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
109.67	115.27	100.71	121.84	158.90	105.77
Video 7	Video 8	Video 9			
117.33	140.01	142.87			
SCHADENFREUDE					
Video 1	Video 2	Video 3	Video 4	Video 5	
204.62	113.70	105.56	77.48	121.86	
SURPRISED					
Video 1	Video 2	Video 3	Video 4	Video 5	Video 6
228.43	309.33	204.08	481.60	399.81	293.10
Video 7	Video 8				
358.70	227.03				