ON THE SUBJECTIVE DISTINCTION BETWEEN TENDERNESS AND JOY

Juan Pablo Kalawski, M.A.

Dissertation Prepared for the Degree of

DOCTOR OF PHILOSOPHY

UNIVERSITY OF NORTH TEXAS

December 2006

APPROVED:

Kenneth W. Sewell, Major Professor and Director of Clinical Training
Harry Benshoff, Committee Member
Martin Bink, Committee Member
Randall Cox, Committee Member
Linda Marshall, Chair of the Department of Psychology
Sandra L. Terrell, Dean of the Robert B. Toulouse School of Graduate Studies
Kalawski, Juan Pablo, *On the subjective distinction between tenderness and joy*. Doctor of Philosophy (Clinical Psychology), December 2006, 33 pp., 1 table, 3 illustrations, references, 34 titles.

Previous studies have shown that the experience of joy normally accompanies the experience of tenderness or love. Theorists have thus suggested that tenderness is not a distinct emotion, but rather a variety of joy. The present study explored whether it is possible to induce tenderness while inhibiting joy. Participants watched scenes designed to induce different emotions. Results showed that a scene could induce high levels of tenderness and low levels of joy if that scene also induced high levels of sadness. These findings suggest the need to reconsider theoretical assumptions regarding the distinction between tenderness and joy.
Introduction

Many people have pets. Regardless of the animal they prefer, most would likely agree that they feel a distinct emotion when playing with, looking at, or even thinking about their pet. What emotion is it? No doubt, it is a positive or pleasant emotion. When people hear a good joke, they laugh. They also experience a pleasant emotion. Are pets and jokes just different ways to induce the same emotion or does each tend to induce a different emotion? The answer depends on how one defines what an emotion is and what criteria one sets to tell one emotion from another. It would probably be safe to say that, for most lay people, two emotions are different if they feel different. In a few words, the goal of the present study is to find out whether people feel the same emotion when watching a “cute” animal scene as when watching a comedy routine. The main hypothesis was that those two situations would evoke two different emotions. In particular, that watching an animal scene would elicit tenderness, whereas a comedy would elicit joy.

Alternative names for tenderness include acceptance, love, friendliness and, agreeableness. Synonyms for joy include happiness and amusement.

The question of whether there is a distinct emotion of tenderness is important, because such emotion might also have its own antecedents and consequences. For example, one area where this question may prove relevant is couples’ therapy. One recent approach to therapy, emotionally focused couples therapy, involves working with the ongoing emotions of the couple as they interact during the session (e.g., Johnson, 1996; Johnson, Hunsley, Greenberg, & Schindler, 1999). In this approach, the therapist encourages each member of the couple to express his or her vulnerabilities. When one partner expresses vulnerability appropriately and in the right context, the other partner tends to become more accessible and responsive. This approach to therapy has shown to be effective. However, although its proponents characterize the
change process as emotional, they do not specify which emotion is at the core of the process of increased responsiveness in response to vulnerability. That emotion is probably tenderness. In the context of couples’ therapy, a better understanding of tenderness would be useful in several ways: First, it would help better understand how to elicit it. Second, it could help recognize its presence or absence. Finally, it could help clarify the behavioral and cognitive consequences of this emotion or lack thereof.

The usefulness of the study of tenderness is not limited to couples therapy, however. The study of tenderness could also shed light on topics as diverse as psychopathy, parenting, or the client-therapist relationship. However, for the promise of tenderness research to be fruitful, it is important to start by defining it in relation to other emotions.

As previously said, the problem of distinguishing among emotions rests in part on how one defines an emotion. Although often people equate the concept of emotion with that of a subjective feeling, the scientific study of emotions has long emphasized the relationship between emotions and action. Darwin (1872) focused his seminal book *The Expression of the Emotions in Man and Animals* on this topic. Later, James (1894/1994) went as far as to suggest that body actions were in fact the causes of emotions. Other psychologists quickly criticized this notion. Ellsworth (1994) suggested that an oversimplified view of James’s ideas provided the framework for a century of research (or lack thereof) on emotions. Regardless of the causal relations among different aspects of emotions, contemporary emotion theory emphasizes the action-oriented aspect of emotions. For example, Lewis and Granic (1999) proposed the following definition:

> We define an emotion as a global, non-reducible affective state that is non-specific as to semantic content (Izard, 1984), similar physiologically and phenomenologically across individuals and cultures (Ekman, 1984), elicited by a specific class of situations related to the organism’s goals (Oatley & Johnson-Laird, 1987) and that motivates behavioral responses to those situations (Frijda, 1986). (p. 689)
This definition provides a clue as to why it is important to study emotions. Emotions are not just something that people feel. They motivate behavioral responses. Thus, knowing a person’s emotion is important to understanding that person’s behavior. Here lies the relevance of distinguishing between joy/amusement and tenderness. If those two labels do correspond to different emotions, being able to distinguish between them should enhance one’s understanding of human behavior. The view of emotions as global states implies viewing human beings as behaving in a modular, organized fashion. That is, different aspects of the person’s functioning tend to work together. Bloch and Lemeignan’s (1992) definition of emotion emphasizes this aspect:

We would like to define an emotion as a complex and dynamic functional state of the entire organism, triggered by an internal or external stimulus, integrated in the central nervous and neuroendocrine systems, involving simultaneously a particular group of effector organs (visceral, humoral, neuromuscular) and a subjective experience (feeling). (p. 32)

In sum, emotion is a complex, organized global state that normally involves physiological processes, overt behavior, and subjective experience. As indicated by the title of this work, the focus of this study is with the subjective distinction between tenderness and joy. However, if tenderness is truly a distinct emotion, it should also include associated behaviors. Darwin (1872) appeared to be ambivalent as to whether tenderness comprises both subjective feeling and overt behavior:

Although the emotion of love, for instance that of a mother for her infant, is one of the strongest of which the mind is capable, it can hardly be said to have any proper or peculiar means of expression; and this is intelligible, as it has not habitually led to any special line of action. (p. 214)

However, he immediately added:

No doubt, as affection is a pleasurable sensation, it generally causes a gentle smile and some brightening of the eyes. A strong desire to touch the beloved person is commonly felt; and love is expressed by this means more plainly than by any other. Hence we long
to clasp in our arms those whom we tenderly love. We probably owe this desire to inherited habit, in association with the nursing and tending of our children, and with the mutual caresses of lovers.

With the lower animals we see the same principle of pleasure derived from contact in association with love. Dogs and cats manifestly take pleasure in rubbing against their masters and mistresses, and in being rubbed or patted by them. Many kinds of monkeys, as I am assured by the keepers in the Zoological Gardens, delight in fondling and being fondled by each other, and by persons to whom they are attached. (pp. 214-215)

More recently, the scientific study of tenderness has been almost nonexistent. A search for the term “tenderness” on the PsycInfo database yields mostly studies on tender pain/organs. Only about 21 articles since 1984 have dealt with the emotion of tenderness, and many of them are not empirical studies. There may be several reasons for this apparent neglect. Fredrickson (1998) has pointed out that most emotion theory and research has focused on emotions usually seen as negative. As an example, the authoritative Handbook of Cognition and Emotion (Dalgleish & Power, 1999) includes chapters devoted to the specific emotions of anger, disgust, anxiety, panic, sadness, shame, and jealousy. This contrasts with only one chapter on “positive affect.” Fredrickson speculates that one of the reasons for this bias is the tendency of psychologists to focus on problems. Negative emotions are associated with problems such as depression and violence. Fredrickson argues, however, that positive emotions may provide solutions to the problems generated by negative emotions.

Even when psychologists study positive emotions, they most often study joy. One can see this by the fact that the most common technique for inducing “positive mood” or “positive affect” consists of showing short humorous films to participants (e.g., Forgas, 1999; Hertel, Neuhof, Theuer & Kerr, 2000; Roesch, 1999). In contrast, the study of tenderness has been particularly scarce.

There is, of course, a large quantity of literature on love. However, the word “love” normally denotes a disposition to respond emotionally rather than an emotion per se (Ekman,
1999). For instance, one can say that Joe loves his wife, even though he might currently be at work and not even thinking about her. Still, one can characterize an emotional disposition as revolving around a specific emotional state. For instance, hate is a disposition to respond with anger against a particular person, even though that disposition may lead to other emotions such as joy when the hated person suffers a misfortune. The question then is what emotional state gives rise to love.

It is not possible to identify such emotion without first being explicit about what one means by “love.” Shaver, Morgan, and Wu (1996) suggested that love stems from the functions of three behavioral systems originally described by Bowlby: attachment, care giving, and sex. These authors thus suggested that the statement “I love you” could mean any or all of the following:

1. “I am emotionally dependent on you for happiness, safety, and security; I feel anxious and lonely when you’re gone, relieved and stronger when you’re near. I want to be comforted, supported emotionally, and taken care of by you. Part of my identity is based on my attachment to you.” *(Love as Attachment.)*

2. “I get great pleasure from supporting, caring for, and taking care of you; from facilitating your progress, health, growth, and happiness. Part of my identity is based on caring for you, and if you were to disappear I would feel sad, empty, less worthwhile, and perhaps guilty.” *(Love as Caregiving.)*

3. “I am sexually attracted to you and can’t get you out of my mind. You excite me, ‘turn me on,’ make me feel alive, complete my sense of wholeness. I want to see you, devour you, touch you, merge with you, lose myself in you, ‘get off’ on you.” *(Love as Sexual Attraction.)* (p. 93)

Tenderness is probably the emotion at the center of love as care giving. Of course, that does not mean that the other forms of love exclude the emotion of tenderness. However, tenderness may not be as central to those forms of love as other emotions are.\(^1\) The present study

---

\(^1\) Love as attachment may revolve around the dialectics between emotions felt during interactions with the object of attachment and emotions felt when the object is lost. On one end, there is joy (Ekman, 1999, found cross-cultural evidence that seeing a friend induces joy) or perhaps contentment (as defined by Fredrickson, 2000). On the other end, there is sadness (Panksepp, 1998). The emotion at the core of sexual attraction is sexual arousal. Although most
will use the following definition of tenderness by Frijda (1986): “Tenderness can be regarded as the impulse toward tender—that is, caregiving—behavior; or else as the acute act of recognition of an object as a fit object for such behavior” (p. 83).

Previously provided definitions of emotion emphasized its global nature, including both subjective and behavioral components. Ekman (1999) proposed that to consider a phenomenon an emotion, it must have the following characteristics: (a) distinctive universal signals; (b) distinctive physiology, (c) automatic appraisal, tuned to (d) distinctive universals in antecedent events; (e) distinctive appearance developmentally; (f) presence in other primates; (g) quick onset; (h) brief duration; (i) unbidden occurrence; (j) distinctive thoughts, memories, images; and (k) distinctive subjective experience (p. 56).

Ekman admitted that research has not yet established that any emotion fulfills all the criteria he proposed. One can easily notice that most of them state that the characteristic must be “distinctive.” This word means that the characteristic must differ from that of other emotions. For instance, anger and fear are (distinct) emotions, whereas anxiety is (just) a variety of fear, given that they share universal signals, physiology, and so on. It may sound odd to doubt that tenderness is a distinct emotion. In fact, all non-psychologists I have asked think it is. However, Ekman, as most researchers, does not consider tenderness an emotion. Similarly, Fredrickson (1998) suggested that “love experiences are made up of many positive emotions, including interest, joy, and contentment” (p. 306).

One of the reasons for disregarding tenderness as an emotion is the confusion between the transient state of tenderness and the emotional disposition of love (Shaver et al., 1996). Whereas love does not meet the criteria of quick onset and brief duration, tenderness probably...
does. Nevertheless, researchers also appear to argue that momentary “surges” (Shaver et al., 1996) of love are not themselves different from joy; that is, the difference would only be in context. For example, a person might experience the same emotion (subjectively, physiologically, and so on) when reading a funny story and when holding a baby. The difference would not lie in the emotion itself, but in the context in which it occurs. Again, this argument may sound odd for most laypeople, but for one reason or another, it is the mainstream view in the psychology of emotions.

Contrary to the views of renowned emotion researchers, there is evidence that joy, tenderness, and sexual arousal have different physiological and expressive patterns. Researchers have found evidence of this distinction in a variety of cultures. In the early 1970s, in Chile, Bloch (2002) and her colleagues began a program for studying the psychophysiology of five emotions that they a priori considered basic: joy, anger, sadness, fear, and love. Their findings, however, led them to differentiate two varieties of love: eroticism (sexual arousal) and tenderness. They discovered that these two emotions included different breathing patterns, body postures, and facial expressions, which were also different from those of joy (Bloch, Lemeignan, & Aguilera-T, 1991; Bloch, Orthous, & Santibáñez-H, 1987; Santibáñez-H & Bloch, 1986). Santibáñez-H and Bloch (1986) also found that whereas joy and eroticism increased heart rate, tenderness decreased it. In another study, French participants were able to distinguish effectively among the postural and facial expressions of joy, eroticism, and tenderness (Lemeignan, Aguilera-Torres, & Bloch, 1992). In Hawaii, Hatfield, Hsee, Costello, Weisman, and Denney (1995) found that psychology students correctly distinguished non-verbal vocalizations of joy from those of tenderness.
The quest for the subjective distinction between tenderness and joy has been more difficult. For example, a study (Kalawski, 2003) found a .76 Pearson correlation between the Elated (joy) and Agreeable (tenderness) scales of the bipolar form of the Profile of Mood States (Lorr & McNair, 1988).

Hatfield et al. (1995) reported two experiments relevant to this issue. In the first experiment, participants read aloud scripts for “joy and happiness,” “love,” “sadness,” and “anger.” Below are the scripts for joy and love:

*Joy and Happiness*

Today is the happiest day of my life. It’s my 20th birthday. Some buddies of mine decided to throw a party for me. They rounded up a bunch of my friends, snuck into my apartment, decorated it, and waited for me to come in from work. When I walked in the door they were! I couldn’t believe it. There was screaming and shouting and I could hardly stop laughing. I can’t imagine I’ll ever have a day like that again.

*Love*

Well, let me tell you. Now that I’m in love, I think about John (Susan) constantly. I can twist any conversation around in my mind so that it’s really about him (her). I imagine what he (she) would say to me and how I might tell him (her) things I have never told anyone before. When I see him (her), POW! my heart takes a leap, my cheeks flush, and I can’t help smiling. At night before I go to bed, I think of how adorable he (she) is and how much I love him (her). (pp. 298-299)

Participants in the joy condition reported feeling more joy than those in the other conditions, except for love. Participants in the love condition did feel more love than those in any other condition.

In the second experiment, participants reproduced the non-verbal vocalizations that previous research had found associated with tenderness, joy, sadness, anger, fear, and a neutral state. Again, the distinction between joy and love/tenderness was less clear-cut than the distinctions among the other emotions. Participants in the joy condition reported greater joy than did those in all the other conditions. Although participants in the love condition reported feeling
more love than those in all other conditions, the difference with the joy or neutral conditions was not significant.

The first experiment showed that a love script induced both joy and love feelings, while a joy script only produced joy. Conversely, without script (second experiment), tender vocalizations had a weak effect on subjective feelings. These results appear consistent with the notion that tenderness is some kind of combination of joy and additional cognitive processes. However, an alternative explanation could be that vocal feedback has less impact on love/tenderness than on other emotions. In addition, the fact that the love script induced both love and joy could mean that the script itself depicted a situation both lovable and joyful, and that different stimuli might induce pure tenderness. It is important to bear in mind that the love script used by Hatfield et al. (1995) presented a dispositional form of love that can well include tenderness along with other emotions. Furthermore, it is perfectly conceivable that many situations, both in laboratory and in daily life, may call for both tenderness and joy. This would explain the high correlation between measures of these two emotions, which could in fact reflect a high correlation between joy- and tenderness-inducing stimuli. Finally, it is possible that people might use words such as “joy” to refer to pleasant feelings in general, but, if required, are able to tell joy from tenderness.

Following this rationale, it may be possible to find a stronger subjective distinction between tenderness and joy using cognitively simpler emotional stimuli, that is, stimuli that minimize reliance on relationship schemas (although it might be impossible to completely eliminate such reliance). Using “purer” stimuli, that is, stimuli less likely to induce other emotions (although, again, it might be hard to find stimuli that consistently induce only one emotion across persons) might also help. Given the difficulty of finding pure emotional stimuli,
stimuli that selectively inhibit either joy or tenderness might lead to a better distinction between the two emotions. If tenderness were nothing more than joy in a particular context, then it would not be possible to inhibit joy without also inhibiting tenderness. Conversely, if they were distinct emotions, then it would be possible to arouse one while inhibiting the other.

The question then is what kinds of stimuli can selectively inhibit either joy or tenderness. The answer appears quite simple. Most people would regard joy as the opposite of sadness. Similarly, one can consider tenderness as the opposite of anger. Some research findings are also consistent with this argument. Lorr & McNair, for instance, (1988) reported the discovery of six bipolar mood factors. One of them had “elated” (joy) and “depressed” (sadness) as their poles. Another factor’s poles where “agreeable” (tenderness) and “hostile” (anger). There are several ways to interpret this kind of results. The first interpretation is that the two poles of each factor represent extremes of a single process. Another interpretation is that emotions such as joy and depression result from different processes that somehow inhibit each other. Thirdly, one might view these results as reflecting the fact that situations that induce one polar emotion normally do not induce the emotion considered its opposite. Under this interpretation, sadness is not necessarily opposite to joy; they just tend to occur in different situations. Thus, it is conceivable that a situation might induce both joy and sadness; it is just not very likely. Whatever the interpretation, it is safe to assume that stimuli that induce certain emotions also tend to preclude the experience of other specific emotions.

The present study thus took advantage of that fact. In particular, the hypothesis was that stimuli that induce anger would inhibit the experience of tenderness, and that stimuli that induce sadness would inhibit the experience of joy. A related assumption was that anger-inducing stimuli would be less likely to inhibit joy, and that sadness-inducing stimuli would be less likely
to inhibit tenderness. This is of course only possible if tenderness is distinct from joy, which was the main hypothesis at the conceptual level.

The present study employed five types of stimuli, as presented in Figure 1. The stimuli varied along two dimensions: sadness-joy, and anger-tenderness. The main hypothesis was that tender stimuli would lead to higher levels of tenderness and lower levels of joy than joyful stimuli would. Another hypothesis was that tender stimuli would lead to higher tenderness than a "neutral" stimulus would. Likewise, joyful stimuli would lead to higher joy/amusement than the neutral stimulus would. Another hypothesis was that the pitiful stimulus would lead to lower joy than the joyful stimuli would. Similarly, the ironic stimulus would lead to lower tenderness than would the tender stimuli.

In addition to finding out what types of stimuli differentially induce tenderness versus joy, it was important to know what "tenderness" meant to participants. Thus, they rated tenderness on three dimensions: passive-active, unpleasant-pleasant, and relaxed-tense. The research and theory previously reviewed are consistent with a view of tenderness as active, relaxed, and pleasant. It is active as it provides the impulse toward care giving behavior. It is relaxed according to research on its physiology and expression. Finally, one could classify tenderness as pleasant partly because of its association with love, which theorists associate with positive emotion.

<table>
<thead>
<tr>
<th>Joy Dimension</th>
<th>Tenderness Dimension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sad</td>
<td>Angry</td>
</tr>
<tr>
<td></td>
<td>Neutral</td>
</tr>
<tr>
<td></td>
<td>Tender</td>
</tr>
<tr>
<td>Neutral</td>
<td>Pitiful</td>
</tr>
<tr>
<td>Joyful</td>
<td>Ironic</td>
</tr>
<tr>
<td></td>
<td>Funny</td>
</tr>
</tbody>
</table>

*Figure 1. Emotional stimuli conceptualized on sadness-joy vs. anger-tenderness dimensions.*
Method

Participants

One hundred forty seven undergraduates from the research pool of the University of North Texas psychology department participated in the study. Their mean age was 22.15 years old ($SD = 5.92$). The modal age was 19 years old. Separate schedules for males and females randomly assigned each participant to his or her condition. Table 1 shows the number of males and females in each condition.

Table 1

Participants per Condition

<table>
<thead>
<tr>
<th>Gender</th>
<th>Cute</th>
<th>Pitiful</th>
<th>Funny</th>
<th>Ironic</th>
<th>Neutral</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>12</td>
<td>12</td>
<td>11</td>
<td>13</td>
<td>13</td>
<td>61</td>
</tr>
<tr>
<td>Female</td>
<td>15</td>
<td>20</td>
<td>15</td>
<td>18</td>
<td>18</td>
<td>86</td>
</tr>
<tr>
<td>Total</td>
<td>27</td>
<td>32</td>
<td>26</td>
<td>31</td>
<td>31</td>
<td>147</td>
</tr>
</tbody>
</table>

Design

As previously stated, the main hypothesis was that tender stimuli would lead to higher levels of tenderness and lower levels of joy than joyful stimuli would. Testing this hypothesis involved turning two separate dependent variables (tenderness score and joy score) into one dependent variable (emotion score) under two within-subjects conditions (tenderness and joy). This procedure made it possible to test the interaction between the main emotional characteristic of the stimulus (tender or joyful) and the type of emotion measured (tenderness or joy), expected to be significant. Thus, the main analysis used a $2 \times 2 \times 2$ mixed factorial design. The first, between subjects, factor was the main emotional characteristic of the stimulus: joyful or tender. The second between subjects factor was the presence or absence of features that inhibit the other
emotion. That is, sadness-inducing features in a tenderness-inducing stimulus would inhibit joy. Conversely, anger-inducing features in a joy-inducing stimulus would inhibit tenderness. The third, within-subjects factor was the type of emotion measured: joy or tenderness. If joy and tenderness are in fact distinct emotions, as hypothesized, there should be an interaction between the main emotional characteristic of the stimulus and the type of emotion measured, such that participants in the joy-inducing conditions would score higher on the joy measure, and participants in the tenderness-inducing conditions would score higher on the tenderness measure. There was no prediction as to whether the presence or absence of inhibiting features would moderate that interaction. The previously described interaction could occur across the board, or it could occur only when the inhibiting features were present.

Gender was an additional factor for that main analysis and for other analyses. It seemed plausible that men and women would report different emotions under different conditions, or that gender could have a main effect on any of the emotional measures. Those differences, if present, could stem from genetic or environmental causes, or a combination of both.

Materials

Emotional stimuli. The cute scene was a segment from the movie Animal Bloopers (Ingle & Heck, 1994), lasting approximately 1 min and 45 s. In it, a zookeeper explains how he takes care of a baby Asian otter while images show the animal in several activities. The expectation was that this scene would elicit tenderness as the baby otter can be an object for care-giving behavior.

The pitiful scene was a segment from The Bear (Annaud, 1989), lasting approximately 1 min and 34 s. The scene shows a cub bear and its mother. A big rock falls on top of the mother,
causing its death. The cub tries to rescue the mother unsuccessfully. As in the case of the baby otter, the cub can be an object for care-giving behavior, which should induce tenderness. Additionally, both the death of a family member and failure to achieve an important goal (in this case, saving the cub’s mother) tend to elicit sadness (Izard, 1991), so if participants identify with the cub they should experience those emotions too.

The funny scene is a segment from *Bill Cosby: Himself* (Cosby & Cosby, 1982), lasting approximately 2 min and 13 s. In this scene, Bill Cosby humorously describes his experiences with dentists. As this scene is from a popular comedian, the expectation was that it would induce joy/amusement.

The ironic scene was a segment from the movie *Brazil* (Gilliam, 1985), lasting approximately 1 min and 13 s. The character played by Jonathan Pryce is in a minuscule office receiving documents though a tube, which he must then insert into another tube. The documents come in faster than he can manage. When he finds a way to connect the two tubes, someone pulls his desk from the adjacent office. Finally, the tube explodes, causing a rain of paper. The expectation was that this ridiculous situation would elicit joy/amusement. However, participant would also experience anger if they identified with the frustration endured by the character.

The neutral scene was from an interview with B. F. Skinner (Miller, 1977), lasting approximately 1 min and 20 s. In it, Skinner explains operant conditioning. There was no expectation that this scene would induce high levels of any emotion.

Before beginning the present study, I showed all the segments, except the one from Bill Cosby, to colleagues to assess whether their reactions matched the expected ones. All my colleagues reported the predicted pattern of emotions to the cute, pitiful, and neutral scenes. In
response to the ironic scene, one person reported feeling anger and joy/amusement, as expected. Another one reported only anger, and a third person reported sadness.

Measures. There were a set of standard demographic questions (see Appendix A). The emotion questionnaire had the following instructions: “Below are four emotions. Please circle how much of each emotion you felt in response to the video. The number 0 means that you did not feel the emotion at all. The number 10 represents an extreme level of that emotion. You can circle any number.” There were separate lines for Joy/Amusement, Tenderness, Sadness, and Anger. Following the emotion questionnaire in a separate page, participants answered a questionnaire with the following instructions: “One of the emotions we asked you about in the previous page was TENDERNESS. Regardless of how much tenderness you felt, we want to know what tenderness means to you. For each item below, please circle the number that you think represents tenderness. There is no right or wrong answer.” After those instructions, there were three semantic differential scales. Each scale had a 0-10 range. The anchors were passive-active, unpleasant-pleasant, and relaxed-tense. Appendix B presents both questionnaires.

Procedure

Students participated in this experiment individually. After providing informed consent, participants completed the demographic questionnaire. An experimenter then started the videotape and then went to the back of the room to avoid giving the participant any cues regarding reactions to the scene. Once the scene was over, the experimenter handed the participant the questionnaires to complete. For participants watching the pitiful scene, before starting the video, the experimenter added, “The scene you will watch is not from a documentary. It is from a fictional movie.” The reason for this explanation is that one pilot
participant reported feeling angry that someone would film the death of an animal without
intervening.

Results

Manipulation Checks

Before testing the hypotheses regarding tenderness and joy, the first set of analyses tested
the effectiveness of the features meant to inhibit those emotions. The first step in this process
was testing whether the ironic and pitiful scenes had actually induced anger and sadness,
respectively. The next step was testing the correlation between anger and tenderness on the one
hand, and sadness and joy on the other. The hypothesis was that both correlations would be
negative.

An ANOVA comparing anger scores among the five experimental conditions (cute,
pitiful, funny, ironic, and neutral) yielded a significant gender main effect ($F(1, 137) = 4.84, MSe
= 3.07, partial $\eta^2 = .59$). There was also a significant scene x gender interaction ($F(4, 137) =
2.66, MSe = 3.07, partial $\eta^2 = .07$). Therefore, the next analyses were tests of simple effects for
males and females. Among males, the scene watched had a significant effect on anger scores
($F(4, 56) = 6.66, MSe = 3.78, partial $\eta^2 = .32$), as expected. paired Bonferroni comparisons
showed that the ironic scene ($M = 3.62, SD = 2.90$) led to the higher anger scores than the neutral
($M = .69, SD = 2.21$), cute ($M = .30, SD = .95$), and funny ($M = .04, SD = .20$) scenes did. The
scores from the pitiful condition ($M = 1.66, SD = 1.66$) did not differ significantly from those of
any other condition. This pattern of results was the one expected, except that the anger scores in
the pitiful condition were not statistically different from those in the ironic condition.
The scene watched had a significant effect on anger scores for females ($F(4, 81) = 4.29$, $MSe = 2.58$, partial $\eta^2 = .18$). Contrary to the expectations, paired Bonferroni comparisons did not yield a significant difference between the ironic condition scores ($M = 1.17$, $SD = 2.17$) and those of the other conditions. The scores for the pitiful condition ($M = 1.80$, $SD = 2.48$) were higher than those for the neutral ($M = .22$, $SD = .73$), cute ($M = .07$, $SD = .26$), and funny ($M = .07$, $SD = .26$) conditions, which did not differ from each other.

The next ANOVA compared sadness scores among the five experimental conditions. Gender had no main or interaction effects ($Fs < 1$). Consequently, the analysis presently reported did not include gender as a factor. As expected, the scene watched had a significant effect on these scores ($F(4, 142) = 148.50$, $MSe = 2.38$, partial $\eta^2 = .81$). Paired Bonferroni comparisons showed that the pitiful scene led to higher scores ($M = 8.19$, $SD = 1.79$) than any of the other scenes did. The scores of the cute ($M = 1.33$, $SD = 1.98$), ironic ($M = 1.16$, $SD = 1.68$), neutral ($M = .45$, $SD = 1.31$), and funny ($M = .04$, $SD = .20$) conditions did not differ from each other. These results are consistent with the expectation that the pitiful scene would induce more sadness than all other conditions would.

The next step of the manipulation check was testing the correlation between anger and tenderness and joy and sadness respectively. The former correlation was not significant ($r = .06$, $p = .43$), contrary to the hypothesis. The latter correlation was negative ($r = -.44$, $p < .01$), as expected.

To summarize, the ironic condition appeared to succeed at inducing anger in males. However, among females, the pitiful, not the ironic, condition induced the most anger. Furthermore, anger did not inhibit tenderness, and the pitiful condition, meant to induce
tenderness, led to an unexpectedly high level of anger. The pitiful condition did appear to succeed at inducing sadness. Sadness, in turn, had a negative correlation with joy.

**Main Analysis**

The next analysis was a 2 x 2 x 2 ANOVA according to the design previously described, plus gender as a fourth factor. As previously explained, the dependent variable was the emotion score of either tenderness or joy depending on the level of the within-subjects factor. The within-subjects analysis yielded no interaction effects of gender ($F_s < 1$). Consequently, the analysis presently reported did not include gender as a factor. There was a significant emotion measure x main emotional feature x inhibiting feature interaction ($F(1, 112) = 24.50, MSe = 3.04, \text{partial } \eta^2 = .18$). This means that the presence or absence of inhibiting features moderated the interaction between the emotion measure and the main emotional feature. Further exploration of this three-way interaction involved running separate tests of simple effects for the participants who saw the scenes with inhibiting features and for those who saw the scenes without those features. Again, gender was not a factor. There was a significant interaction between the emotion measured and the main emotional characteristic of the scene, both for the inhibiting features condition ($F(1, 61) = 191.36, MSe = 3.73, \text{partial } \eta^2 = .76$) and the no inhibiting features condition ($F(1, 51) = 73.73, MSe = 2.22, \text{partial } \eta^2 = .59$). However, the interaction took a different form depending on whether or not the scenes included an inhibiting feature. Figure 2 shows the results for the scenes that included the features to inhibit joy (pitiful scene) or tenderness (ironic scene). In the
case of the scenes with the inhibiting features, the ironic scene led to low tenderness ($M = .90, SD = 1.56$) and higher joy/amusement ($M = 4.45, SD = 2.74$), whereas the pitiful scene led to high tenderness ($M = 7.00, SD = 2.02$) and low joy/amusement ($M = 1.03, SD = 1.36$). In the case of the scenes without the inhibiting features (Figure 3), the funny scene led to low tenderness ($M = 2.08, SD = 2.38$) and high joy/amusement ($M = 7.19, SD = 1.90$), whereas the cute scene led to high scores for both tenderness ($M = 7.22, SD = 1.93$) and joy/amusement ($M = 7.37, SD = 1.88$). The interaction between the main emotional feature and the emotion measured was consistent with the main hypothesis of the present study.
Comparison Among All Groups

Given an interaction between the main emotional feature and the emotion measure, a possible next step could be to run tests of simple effects for each emotion measure. As the interaction was significant for conditions both with and without inhibiting features, that would yield four separate tests. An alternative, more informative strategy consisted of running two ANOVAs comparing scores among all five experimental conditions (cute, pitiful, funny, ironic, and neutral). The dependent variables were the tenderness and joy scores respectively. Preliminary analyses showed no main or interaction effects of gender on either variable ($F$s < 1).
As expected, the experimental condition significantly affected tenderness scores ($F(4, 142) = 93.51, MSe = 3.39, partial \eta^2 = .72$). Paired Bonferroni comparisons showed that tenderness scores were higher for the cute and pitiful scenes than for the funny, ironic, and neutral ($M = .71, SD = 1.22$) scenes. These were the hypothesized results.

As expected, the experimental condition significantly affected joy scores ($F(4, 142) = 61.81, MSe = 3.97, partial \eta^2 = .64$). Paired Bonferroni comparisons showed that the funny and cute conditions led to higher joy scores than all other conditions did. The ironic condition, in turn, led to higher scores than the pitiful and neutral ($M = 1.97, SD = 1.82$) conditions. These results were consistent with the hypotheses, with the exception that there was no prediction regarding how much joy the cute scene would induce.

Participants’ Views of Tenderness

The next series of analyses dealt with the participants’ responses to the questionnaire on the meaning tenderness had for them. Their responses could range from 0 (passive, unpleasant, or relaxed, depending on the item) to 10 (active, pleasant, or tense, respectively). A score of 5 meant neutral. Participants rated tenderness as neither passive nor active ($t(146) = 1.40, p = .16, M = 5.26, SD = 2.24$). This was contrary to the hypothesis that they would rate it as active. There was no correlation between this item and participants’ tenderness scores ($r = .01, p = .91$). Furthermore, the answer to this question did not differ by gender ($F(1, 145) = 1.06, MSe = 5.03, partial \eta^2 = .01$).

As expected, participants rated tenderness as pleasant ($t(146) = 5.84, p = < .01, M = 6.49, SD = 3.10$). There was no correlation between this item and participants’ tenderness scores ($r = -.07, p = .38$). The answer to this question did not differ by gender ($F(1, 145) = .14, MSe = 9.64$, 21
partial $\eta^2 < .01)$. Also as expected, participants rated tenderness as relaxed ($t(146) = 8.47, p = < .01, M = 3.26, SD = 2.49$). Again, there was no correlation between this item and participants’ tenderness scores ($r = .13, p = .11$). Likewise, the answer to this question did not differ by gender ($F(1, 145) < .01, MSe = 6.26, partial \eta^2 < .01$).

Discussion

For both the conditions with and without inhibiting features, there were interactions between the type of stimuli (joyful or tender) and the emotion measured (joy or tenderness). This means that the main emotional characteristic of the stimuli had different effects on the measure of joy than it did on the measure of tenderness. This pattern of results was consistent with the notion that the experience of tenderness is distinct from that of joy. When comparing all the conditions, the pitiful scene led to higher tenderness scores than did the funny, ironic, and neutral scenes. This same pitiful scene, however, led to lower joy scores than did the funny and ironic scenes. This pattern of scores could not be possible if tenderness were just a variety of joy, as some authors have suggested. If that were the case, any stimulus that induces tenderness would also have to induce joy. That was not the case for the pitiful scene. These results thus suggest that the experience of joy is not necessary for the experience of tenderness.

As shown in Figure 3, the cute scene led to both high joy and high tenderness, whereas the funny scene led to high joy but low tenderness. These results were essentially analogous to the results reported by Hatfield et al. (1995) for participants who read the love and joy scripts. As previously suggested, one possible interpretation of Hatfield et al.’s results would be that joy is a necessary component of love/tenderness. (The fact that it was possible to induce joy without inducing tenderness led to considering the former as more of a pure emotion while tenderness
appeared to include some other component.) However, the results for the pitiful condition appear to rule out that interpretation for the present study. Instead, it seems more plausible that, even if tenderness is an emotion in its own right, tenderness-inducing stimuli naturally also tend to induce joy. The results of the present study suggest, however, that it is possible to break that tendency and selectively inhibit joy without touching tenderness. Breaking that association appears to require a special circumstance, namely that the stimulus also induces sadness. One possible explanation for why it would take such a special circumstance to break this association is that tenderness triggers a scheme that includes the activation of joy. While joy is associated with play (Panksepp, 1988), tenderness is associated with care giving (Frijda, 1986), which can include play. Such a scheme could be either learned or innate. Another possible explanation for why tender stimuli tend to induce joy is that it is biologically adaptive for tenderness to be reinforcing so that animals would seek it out.

The results of both this study and Hatfield et al.’s (1995) indicate that, whereas tenderness tends to go with joy, the converse is not true. That is, stimuli such as the comedy routine used in the present study tend to induce only joy, not tenderness. This observation is intuitive and, as previously discussed, probably contributed to the view that tenderness is just a particular instance of joy. However, and again as just previously discussed, that view appears inconsistent with the findings of the present study. That being the case, it must still be acknowledged that joyful stimuli do not necessarily induce tenderness. This means that if one wants to induce tenderness (e.g., in an organization or in psychotherapy) one would need to find a way to specifically do so, as opposed to relying on the induction of joy. Of course, this is already clear to professionals in theatre and film. Another implication to viewing tenderness and joy as distinct emotions and not one as a variety of the other has to do with the assessment of
tenderness. For instance, if a therapist were trying to induce tenderness, the client’s report of joy would not be a sufficient marker that the intervention was successful.

As suggested in the introduction, if tenderness and joy are distinct emotions, they may also have distinct cognitive and behavioral consequences. There is much research on the consequences of joy and it is important to complement that knowledge with research on the effect of tenderness. One study (Kalawski, 2003) showed that, under certain conditions, tenderness sped up problem solving, whereas in different conditions it slowed it down. Certainly more research on the effects of tenderness on cognitive processes is necessary.

Viewing tenderness as a specific emotion may also have implications for attachment theory. Bell (2001) argued that attachment theory had focused excessively on the cognitive aspects of care giving at the expense of the emotional impulse towards care giving. Bell’s “caring emotion” appears to be equivalent to tenderness. While attachment theorists do not deny that emotions are important to care giving, it is often not clear what energizes care-giving behavior. In addition, as previously discussed, an emotion is different from an emotional disposition in that the former has a short duration. Just as it is important to study care-giving relationships or the emotional disposition of love, it is now possible to also study the moments of tenderness and how they interact with both relationships and dispositions. In the case of the emotionally focused couples therapy, viewing tenderness as a momentary emotion easily lends itself to that approach’s emphasis on tracking moment-to-moment experience.

One interesting finding of the present study was that the ironic scene induced significant levels of anger only among males. There are several possible explanations for this. The simplest one would be that males are more prone to experience and/or report anger. Another possibility is that it was easier for males to identify with the male character in the scene. Finally, it is possible
that women are more likely to consider anger aversive. If this is the case, the fact that the ironic
scene induced joy could have inhibited anger. More precisely, joy could have inhibited the
conscious experience of anger. If women hold a view of anger as unpleasant, the pleasant feeling
of joy might have prevented them to acknowledge anger consciously. Future research could
empirically test these speculations.

With the exception of the previously discussed gender effect, gender showed no other
significant effects. This is a remarkable finding given that tenderness is stereotypically feminine.
In this study, gender did not relate either to the overall level of tenderness or to what conditions
led to it. This was also the case for joy and sadness. These results suggest that similar situations
induce those emotions in men and women. Furthermore, gender also did not relate to
participants’ views of tenderness.

Another unexpected finding was that anger did not inhibit tenderness. This was especially
ture for women, who reported both emotions in response to the pitiful scene. One explanation
could be that these two theoretically incompatible emotions were nonetheless compatible
because they had different targets: the cub in the case of tenderness and the rock falling on the
bear in the case of anger. It is important to bear in mind that participants did not report their
emotions as they experienced them but retrospectively. Given that pure, basic emotions are brief
(Lewis, 2002), what participants reported in the present experiment was likely a summary of the
emotions they experienced during brief periods while watching the scenes. It is possible that,
while individuals’ attention focuses on the target of either tenderness or anger, they only
experience the corresponding emotion and not the other. This hypothesis could be the subject of
future research.
Participants’ conceptions of tenderness were largely consistent with the ones predicted from the theory. They viewed it as pleasant and relaxed. Contrary to the hypothesis, participants rated tenderness as neither active nor passive. In retrospect, this makes sense if one compares tenderness to anger, for instance. Whereas anger tends to lead to fast-paced, strong action, tender actions are usually slower. That is certainly the case in terms of physical movements (Bloch & Lemeignan, 1992). In addition, in some circumstances, care giving may involve passivity, such as when watching one’s child play from a distance.

One limitation of this study is that there was no clear definition of what aspect of the tender scenes induced tenderness. The two scenes that induced the most tenderness in the present study included baby animals. It is certainly intuitive that that would be the case, but certainly, persons can respond with tenderness to other classes of stimuli as well. Future research could focus on what other types of stimuli induce tenderness.

The issue of what defines a tenderness-inducing stimulus brings the discussion back to the definitional issues on emotion theory discussed in the introduction. As previously discussed, Ekman (1999) proposed 11 characteristics a phenomenon must possess to count as an emotion. This list is consistent with the definitions of emotion as a global, integrated phenomenon. Frijda (1986) noted that in daily speech people often use emotion words to denote, at the same time, one or more characteristics of emotional responses and the situations that trigger those responses. The corollary of these considerations is that the empirical distinction of an emotion from other emotions necessitates a bootstrapping, triangulating sort of process. In the case of the present study, the results were consistent with two interrelated notions. The first one is that the subjective experience of tenderness is different from that of joy. The second is that the stimuli that induce tenderness are different from those that induce joy. Although this reasoning may
appear circular, it is consistent with the integrative nature of emotional processes. Thus, an emotion is not so much a subjective experience, but the relationship between that experience and other items such as their signals (e.g., vocalizations), physiology, and antecedent events. The introduction section included a review of studies on different combinations of aspects of tenderness.

In terms of Ekman’s list, the present study addressed the relationship between antecedent events and subjective experience. As previously said, both tenderness-inducing scenes included baby animals. Future studies should further elucidate the nature of the events that elicit tenderness. There is already some research relevant to this issue. For instance, Langlois, Ritter, Casey, and Sawin (1995) reported that mothers of attractive infants displayed more interactions that were affectionate towards their children than did mothers of unattractive infants. A next step would be to relate those features to the subjective experience of tenderness and to the momentary surges of it, as opposed to the disposition and relationship often called love.

Finally, the present study did not address the appraisal associated with tender stimuli. Possible candidates could be the perceived vulnerability of the object of tenderness, or the perception that the subject is more powerful than the object. This is certainly an empirical question. In sum, the recognition of tenderness as a distinct emotion opens up wide possibilities for future inquiry.
Appendix A

Demographic Questions

Please answer the following questions.

What is your sex?
A Male
B Female

What is your age? _______________________

What is your major? _______________________________________

Choose the option that best describes you:
A Freshman
B Sophomore
C Junior
D Senior

What is your nationality (e.g., USA, Japanese, Canadian, etc.)?
__________________________

If you are from the USA, what is your racial or ethnic background (e.g., African-American, Hispanic, etc.)?
__________________________
Subject number:

DO NOT write your name on this sheet

Below are four emotions. Please circle how much of each emotion you felt in response to the video. The number 0 means that you did not feel the emotion at all. The number 10 represents an extreme level of that emotion. You can circle any number.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th>Extreme</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joy/Amusement</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tenderness</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anger</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sadness</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PLEASE READ CAREFULLY.

One of the emotions we asked you about in the previous page was TENDERNESS. Regardless of how much tenderness you felt, we want to know what tenderness means to you. For each item below, please circle the number that you think represents tenderness. There is no right or wrong answer.

<table>
<thead>
<tr>
<th></th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unpleasant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relaxed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutral</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasant</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tense</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
References


