EFFECTS OF AFFECTIVE EXPECTATIONS ON AFFECTIVE EXPERIENCE: THE MODERATING ROLE OF SITUATIONAL AND DISPOSITIONAL FACTORS

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EFFECTS OF AFFECTIVE EXPECTATIONS ON AFFECTIVE EXPERIENCE: THE MODERATING ROLE OF SITUATIONAL AND DISPOSITIONAL FACTORS

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According to the Affective Expectation Model (AEM), affect is formed with reference to a prior expectation. The model predicts that affective reactions are generally assimilated to an expectation, except in cases when a discrepancy between an affective expectation and an actual stimulus information exists and is noticed. In such cases, affective reactions are expected to be contrasted away from an affective expectation.

Although research has reliably confirmed the assimilation hypothesis, currently, only one previous study supports the contrast hypothesis of the AEM (Geers & Lassiter, 1999). This study, however, can be criticized on the grounds that the contrast effect was achieved by an artificial manipulation. Thus, it may be argued that in everyday life assimilation effects are the norm, whereas contrast effects are virtually non-existent.

The primary goal of the current research was to delineate several conditions in which assimilation and contrast effects emerge in everyday experience. It was hypothesized that both situational and dispositional factors are important in determining whether or not individuals notice that a stimulus is incongruent with an affective expectation. In the four studies described, the potential moderating roles of the individual difference variable optimism - pessimism and of the situational variable cognitive tuning were explored. The results of three of the four studies supported the predictions. Implications of the present results for the affective-expectation literature are discussed.

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Introduction

In attempting to understand how people form preferences such as their likes and dislikes, one must take into account many different factors. Indeed, affective experiences may be the result of a large number of variables, some of which are obvious and others which are not so obvious. For illustrative purposes, consider the following scenario. Three individuals decide to attend a recently released summer movie. All three moviegoers, arriving on time with refreshments in hand, sit down to view the evening’s presentation. If one was trying to predict whether or not these patrons would enjoy their film, what additional information would be of the most use? First, it might be helpful to know the quality of the movie they are about to watch. That is, if the movie is quite good the patrons should be more likely to have a positive reaction to it than if the movie is objectively bad (Klaaren, Hodges, & Wilson, 1994). Research suggests that it would also be useful to acquire information concerning the current mood state of the moviegoers. Perhaps the night they go to the movie theater it is quite cold and dreary outside. Such foul weather could put the patrons in a bad mood, which in turn, could negatively bias their evaluations of the movie (Bower, Gilligan, & Monteiro, 1981; Forgas & Bower, 1987; Schwartz & Clore, 1983). On the other hand, it may be useful to obtain individual-difference information about the movie patrons. For example, if the movie is a comedy aimed at a male audience, female patrons may find it less enjoyable than male patrons. Other individual-level variables that may impact on affective evaluations are personality factors (e.g., David, Green, Martin, & Suls, 1997; Frenkel-Brunswik, 1949). For instance, some people are prone to look at the positive side of events whereas others look at the downside of events (Dember, in press). It might be that some patrons dislike the movie because they take a negative view in most situations whereas other patrons like it because they look on the positive sides of situations.
As the above scenario suggests, many variables can influence the formation of affective reactions. The present research concerns a variable not listed above which may also strongly impact affective reactions: People’s expectations about how they will feel in a future situation. Affective expectations may be the starting place for many affective reactions. For this reason, affect expectations can be classified as “top-down” determinants of affect. That is, this is information brought from outside an experience which can shape the formation of an affective reaction. Top-down determinants of affect stand in contrast to “bottom-up” determinants of affect, which are factors obtained during the affective experience. Many theories of affect now contend that prior knowledge structures such as goals, plans, expectations, mood states, and personality factors partially determine our affective reactions (e.g., David et al., 1997; Fiske, 1982; Mandler, 1982; Ortony, Clore, & Collins, 1988; Roseman, 1984; Rusting, 1998; Wyer, Clore, & Isbell, 1999; Clore, Schwarz, & Conway, 1994). Investigations into the influence of these top-down processes on affect have been successful in showing that affective reactions can indeed be altered by variables independent of the experience in question.

Going back to the movie scenario, what if we were able to learn the following information about the three moviegoers? First, earlier in the day a work colleague told one of the movie patrons that she saw the movie the night before and that it was fantastic. On the other hand, while taking to a roommate, a second individual in this group was told just the opposite; she was told that seeing this movie was a big waste of time. Finally, what if we learned the last individual in this group had not heard anything about this movie before she sat down in the theater that evening. Will these different expectations alter the affective reactions of the moviegoers? If so, in what direction will these prior expectations push their reactions? Also, what variables are likely to moderate the relationship between affective expectations and affective experience?
In the present research, it is argued that anticipated affect has a substantial impact on subsequent affect. Similar to research on social-cognitive judgments (e.g., Schwarz & Bless, 1992; Sherif & Hovland, 1961; Stapel & Schwarz, 1998), it is suggested that prior expectations can lead to both assimilation effects as well as contrast effects. Assimilation effects can be described as instances in which judgments and experiences are shifted towards a prior expectation or other contextual information. For example, expecting to enjoy a movie may result in increased liking for that movie. Conversely, contrast effects can be described as instances in which judgments and experiences are displaced away from a prior expectation or other contextual information (Stapel, Koomen, & Van Der Plight, 1997). That is, in some situations, expecting to enjoy a movie may lead to decreased liking for that movie. The current research is an attempt to illuminate conditions in which assimilation and contrast effects predominate in affective experience.

The present predictions regarding assimilation and contrast effects in affective experience were based on the Affective Expectation Model (AEM) proposed by Wilson, Lisle, Kraft, and Wetzel (1989). I begin by describing this model and reviewing research relevant to its central hypotheses. It is then suggested that the hypothesis for contrast effects in affective experience has not, as of yet, received adequate attention in the literature. It is then proposed that the influence of affective expectations on affective experience is moderated by both situational and dispositional factors. Next, four experiments testing for the moderating role of situational and dispositional variables are presented. Finally, I discuss the implications of the current work for the AEM and provide suggestions for future affective-expectation research.
The Affective Expectation Model

A number of studies have been conducted to explore the role of affective expectations in the formation of affective experience (Berkowitz & Thome, 1987; Fradkin & Firestone, 1986; Geers & Lassiter, 1999; Hodges, Klaaren, & Wheatley, 1999; Klaaren, et al., 1994; Kirsch, Tennen, Wickless, Saccone, & Cody, 1983; Leventhal, Brown, Sacham, & Enquist, 1979; Southworth & Kirsh, 1988; Tate, Stanton, Green, Schmitz, Le, & Marshall, 1994; Wilson & Klaaren, 1992; Wilson et al., 1989). Affective expectations can be described as “people's predictions about how they will feel in a particular situation or toward a specific stimulus” (Wilson & Klaaren, 1992, p. 3). Affective expectations are beliefs such as how funny you think a movie will be, how much you think you will dislike a restaurant, and how anxious you think you will feel while interviewing for a job. These are predictions people have regarding their own future affective states.

A great deal of the affective-expectation research has been guided by the AEM (Wilson et al., 1989). According to this model, affective reactions are formed with reference to a prior expectation. Wilson and colleagues (Klaaren et al., 1994; Wilson & Klaaren, 1992; Wilson et al., 1989) contend that affective expectations (e.g., how much you think you will like a particular movie) are as important in determining affective reactions (e.g., how much you actually like that movie) as the information available during an actual experience (e.g., the objective quality of the movie). Thus, similar to other recent theories of affect (e.g., David et al., 1997; Fiske, 1982; Mandler, 1982; Ortony et al., 1988), this model proposes that the formation of an affective experience does not begin with bottom-up processing. Instead, affective experiences are said to be created through the interplay of the knowledge an individual brings to a situation and the information noticed during an actual experience.
What are the origins of affective expectations? Like other expectancies, they are believed to arise from prior knowledge structures (i.e., schemas) about a stimulus which can be obtained in many different ways (Kirsh, 1999; Olson, Roese, & Zanna, 1996). For example, expectations can develop from one's own previous experience with a stimulus or situation. Thus, people may expect to enjoy watching a television show because they have enjoyed watching that show in the past. Jones and McGillis (1976) refer to these type of expectations as target-based expectancies. Affective expectations may also be based on someone else’s evaluation of a stimulus or situation. For example, a person may expect to like a television show not because they have seen it before but because someone else has given it a favorable evaluation. Jones and McGillis (1976) have termed these category-based expectancies. Expectations may also be derived from what Hochschild (1979) has termed cultural-feeling rules (see also Clore, et al., 1994). These are expectations dictated by cultural norms. That is, a person may never have been to a wedding, or known anyone who has, but still anticipates feeling happy because of cultural norms (Wilson et al., 1989).

Wilson et al. (1989) have proposed that the relationship between the valence (positive or negative) of an affective expectation and the valence of an affective experience can lead to four distinct outcomes. These four categories of outcomes are not meant to have rigid boundaries, but rather are merely meant to clarify the hypotheses of the AEM. Each outcome can be seen as a consequence of the interaction between prior affective expectations and the attributes of an actual experience.

**Case 1: No Affective Expectation**

The first case involves situations in which affective reactions are relatively devoid of prior expectations. In these cases, affective expectations have little or no influence on affective reactions because a relevant expectation does not exist. A possible example of
this category may include going to the opera for the first time with virtually no prior knowledge of what operas are like. Wilson et al. (1989) propose, however, that pure cases in which people arrive at a situation without any prior expectation rarely occur. Instead, they argue that people are constantly categorizing and comparing stimuli, even when prior knowledge about that particular stimulus does not exist (cf. Kahneman & Miller, 1986). Wilson et al. (1989) explain that Case 1 was added to represent those instances in which evaluations are made with minimal reference to prior expectations. Affective experiences formed with such little input from a prior affective expectation are said to be primarily driven by the information obtained during an experience.

Case 2: Stimulus Value Confirms an Affective Expectation

The second category consists of times when the valence of a prior expectation is consistent with the valence of an actual experience. An example of this category includes expecting to like a new movie that turns out to be very enjoyable.

Wilson et al. (1989) have proposed that affective expectations induce a readiness to perceive a stimulus as having a certain valence. This notion of readiness is akin to views of perception (e.g., Bruner, 1957; Neisser, 1967) which describe perceivers as taking an active role in the interpretation of a stimulus. The AEM contends that this increased readiness makes the formation of an affective reaction easier. Similar to the concept of highly accessible attitudes (Fazio, Sanbonmatsu, Powell, & Kardes, 1986; Fazio & Williams, 1986), affective expectations are said to guide people’s perceptions of incoming information and facilitate the processing of congruent information. Affective expectations are described as quickening the affective evaluation of an expectation-congruent stimulus because the perceiver will not have to spend additional time and cognitive processing to ascertain the valence of the stimulus beyond the already existing expectation (cf. Brewer,
In these situations, people are described as making only brief examinations of the stimuli, relying on quick confirmation checks of their expectations to form their reactions. When viewing an expectation-congruent stimulus, the perceiver is expected to depend largely on the affective expectation and less on the actual information provided by the stimulus.

Case 3: The Stimulus Value is Discrepant with an Affective Expectation, and the Discrepancy is Not Noticed

Although the expectations that people bring to a situation can be extremely accurate, oftentimes people are faced with an experience that is incongruent with a prior expectation. Case 3 concerns situations in which an affective experience is inconsistent with an affective expectation but people do not recognize the discrepancy. In this third case it is hypothesized that, in many instances, people perform a less than thorough analysis of an expectation-discrepant stimulus and thus are not apt to notice discrepancies in the stimulus. In such situations, people are predicted to shape affective experiences to fit prior expectations (i.e., an assimilation effect). For example, if a person expects to really enjoy going to the circus they might not realize that, without that affective expectation, they would have found the circus to be somewhat dull.

As in Case 2, people are expected to rely on quick checks to confirm that the stimulus information generally matches their expectation. People are also said to not spend additional time and cognitive resources to determine the valence of an experience beyond an already existing affective expectation (cf. Kirsh, 1999). As has been found in the person impression literature (see Brewer, 1988; Fiske & Neuberg, 1990), it is anticipated that the presence of an expectation often overrides the systematic analysis of available information.
Case 4: The Stimulus Value is Discrepant with an Affective Expectation, and the Discrepancy is Noticed

The last category consists of cases in which the discrepancy between an affective expectation and an actual experience exists and is noticed. In some situations, people’s examination of the situation can reveal discrepancies between an affective expectation and reality that cannot be ignored (Wilson et al., 1989). In these situations, it is predicted that people will adjust their reactions to the expectation-discrepant stimulus in a direction away from their prior expectation (i.e., a contrast effect). In these cases people are also hypothesized to process information in a more thorough manner and to engage in greater conscious thought about the stimulus.

In summary, the AEM emphasizes the role of anticipated affect in the formation of an affective experience. Affective expectations are described as bringing about a state of affective readiness that prepares people to interpret an event in a particular way. This readiness often results in people assimilating an expectation-discrepant experience to an affective expectation. The model further suggests that, although affective expectations predispose people to arrive at certain affective experiences, in some cases, people can recognize that an affective experience is discrepant with a prior expectation. In these cases, affective reactions are expected to be contrasted from the expectation.

Although examples of affective expectations may readily come to mind, historically, there has been a relatively small number of studies conducted to investigate their role in affective experience (Catanzaro & Mearns, 1999; Wilson et al., 1989). Wilson et al. (1989) note that one possible explanation for this may be that whereas affect has been traditionally viewed as “hot” and quick, cognition has been viewed as more “cold” and time consuming. As a result, earlier theorists may have concluded that affect is experienced too quickly for it to be driven by cognitive structures such as expectations. However, Wilson
et al. suggest that rather than impeding affective reactions, expectations invoke a readiness which actually facilitates this process.

Wilson et al. (1989) have also noted that, in broad terms, the AEM can be viewed as an extension of Social Judgment Theory (Sherif, 1979; Sherif & Hovland, 1961) into the realm of affect. Social Judgment Theory predicts that when beliefs are viewed as near an acceptable attitude, they will be assimilated. However, when beliefs are viewed as predominantly discrepant from attitudes, they will be increasingly contrasted (Sherif, 1979). Wilson et al. (1989) suggest that the major difference between their approach and that of Social Judgment Theory is largely in the type of reactions investigated. It should also be noted, however, that the AEM focuses more on the ease and speed by which affective reactions are formed than does Social Judgment Theory. Additionally, the more recent AEM research has begun to explore the mechanisms by which affective expectations influence affective reactions and subsequent judgments (i.e., Geers & Lassiter, 1999; Klaaren et al., 1994). This latter work is also important as it helps to further differentiate the AEM from Social Judgment Theory.

A Review of The Initial Affective-Expectation Research

In the first experimental test of the AEM, Wilson et al. (1989, Study 1) set out to demonstrate the existence of Case 3: instances when people assimilate discrepant experiences to prior affective expectations. In this study, students were asked to evaluate a set of funny and a set of relatively unfunny cartoons. Before reading the cartoons, half of the participants were given the expectation that the cartoons would be funny, whereas the other half were given no expectation. It was predicted that both groups would judge the funny cartoons as being funny. However, it was predicted that the expect-to-like participants would find the unfunny cartoons significantly funnier than participants in the no-expectation condition. Affective reactions to the cartoons were measured by self-report...
ratings of funniness and by participants’ facial reactions while reading the cartoons (filmed by a hidden camera). In addition, the amount of time it took participants to rate the funniness of the cartoons was also measured. Finally, after viewing the cartoons, participants were instructed to list the thoughts they remembered having when they were viewing the cartoons.

When the cartoons were actually funny, participants in both the expect-to-like condition and the no-expectation condition found the cartoons to be funny. However, when the cartoons were relatively unfunny, participants in the expect-to-like condition found the cartoons to be funnier than did the no-expectation participants. That is, the participants expecting to like the cartoons assimilated their affective reactions towards their affective expectations. Not only did the expect-to-like participants rate the cartoons as funnier than the no-expectation participants, they also displayed significantly more facial mirth when evaluating the cartoons (as judged by two independent raters). Consistent with the other predictions of Case 3, the expect-to-like participants took less time evaluating the unfunny cartoons than participants in the no-expectation condition. A marginally significant difference was also found between the number of thoughts listed by the two conditions, with the expect-to-like-participants reporting somewhat fewer thoughts than participants in the no-expectation condition. These final two results were interpreted as evidence that participants in the expect-to-like group found it relatively easy to decide the cartoons were funny, whereas the no-expectation participants needed to put more time and thought into the formation of their affective reactions.

The results of this first study confirmed the existence of Case 3 in which people assimilate their affective experiences to fit a prior expectation. The participants who expected to find the cartoons funny did indeed rate them as funnier and displayed more facial mirth than those who were given no expectation. Also, the expect-to-like
participants seemed to invest less time and effort into forming their affective reactions than the no-expectation participants.

Other researchers have found similar assimilation effects in reports of experienced pain and distress. For example, Leventhal et al. (1979) instructed participants to immerse their nondominant hand in a tank of cold (7 degrees Celsius) water. In some conditions, participants were given the expectation that the water temperature could be painful and unpleasant. Other participants did not receive this expectation manipulation. After the cold water task (which lasted up to 7 min), the expectation participants reported the experience as significantly more unpleasant, painful, and distressing than control participants. That is, the expectation participants assimilated their affective reactions towards their prior expectation. Whereas Wilson et al. (1989) demonstrated assimilation effects to a positive expectation, this study is important in showing that negative expectations can also produce assimilation effects in affective experience. Additionally, this study provides evidence that affective expectations can influence affective reactions other than just those of liking and humor.

In a follow-up to the Leventhal et al. (1979) experiment, Berkowitz and Thome (1987) gave participants either an expectation for pain or no expectation for pain before immersing their nondominant hand in a tank of cold (7 degrees Celsius) water. While their hand was in the tank of cold water, participants were asked to evaluate the performance of another student (actually a confederate of the experimenter). More precisely, participants were told that a student in another room had been given work-related problems and that this student’s task was to generate a quality solution to each problem. The participants were further told that while their hands were in the tank of cold water, they were to allocate punishments (loud blasts of noise) and rewards (money) to the confederate depending on their evaluations of the confederate’s solutions. The main dependent measures in this study
were the affective reactions to the cold water task as well as the amount of punishments and rewards administered to the confederate.

Replicating the results of Leventhal et al. (1979), pain-expectation participants reported finding the cold-water task more unpleasant, painful, and distressing than those in the no-expectation condition. As anticipated, the pain-expectation participants were also found to allocate more punishment and less reward to the confederate than those in the no-expectation condition. The results of this study are consistent with the predictions of Case 2; experiences of distress and pain were assimilated to a negative expectation. In addition, the study also demonstrated that expectations for pain can influence the aggressive behavior people exhibit while feeling that pain.

In another study, Klaaren et al. (1994, Study 2) investigated the influence of affective expectations on both affective experience and subsequent decision-making. In this study, students were asked to watch a silent comedy. Before watching the film, half of the participants were given a positive expectation for the film whereas the other half were given no expectation. Cross-cutting the expectation manipulation, the experiment was made less enjoyable for some participants than for others. More precisely, students in the negative-experience conditions watched the film under rather irritating circumstances (e.g., they had to place their head on a chin rest at a 45 degree angle from the screen, the experimenter adjusted the monitor such that the screen was unpleasantly bright). In contrast, students in the positive-experience conditions watched the film under relatively pleasant circumstances (e.g., the absence of the irritating circumstances endured by the negative-experience participants). Thus, both prior expectation (positive expectation or no expectation) for a to-be-viewed film and objective experience (positive experience or negative experience) while watching the film were manipulated in a 2 x 2 design. After the film, students reported how much they enjoyed this experience. In addition, these
researchers also examined how these two variables (affective expectations and objective experience) influenced decisions to repeat the experience. To do this, three to four weeks after the study, participants were called back and asked to take part in a similar experiment.

First, as expected, participants in the positive-experience conditions enjoyed watching the film more than those in the negative-experience conditions. In addition, the expect-to-like participants reported enjoying the film more than the no-expectation participants. These results strengthen the support for the hypothesis that affective experiences are often assimilated to affective expectations (Case 3). When called three to four weeks after the study, the positive-expectation participants were also more willing to repeat the activity than the no-expectation participants. Demonstrating the importance of affective expectations, the data revealed that peoples' willingness to repeat their experience was influenced more by their affective expectations than by the objective pleasantness of the experience.

In another experiment, Wilson et al. (1989, Study 2) attempted to simultaneously demonstrate both Case 3 and Case 4 of the AEM. Recall that in Case 4, it is predicted that when individuals notices that a discrepancy exists between an affective expectation and an affective experience, they will contrast their affective reaction with their prior expectation. In this experiment, students were asked to rate four moderately funny cartoons, this time with either a positive, negative, or no expectation. To test the predictions of Case 4, the researchers varied the type of analysis participants used to evaluate the cartoons. Specifically, half of the participants were instructed to rate each of the four cartoons separately (individual-rating condition), whereas the other half were asked to make a single evaluation of the group of four cartoons as a whole (overall-rating condition). It was reasoned that when people make more fine-grained evaluations of a stimulus (i.e., in the individual-rating condition) they are more apt to notice the discrepancies between their
expectations and the valence of the stimulus than if they just examine the cartoons globally (i.e., in the overall-rating condition). The individuals making fine-grained analyses were expected to gain more information about the cartoons, allowing them a greater chance to notice the current discrepancy, which in turn should produce the predicted contrast effect. On the other hand, people making global ratings were expected to gloss over the discrepancy leading them to assimilate the stimulus to their prior expectation. Affective reactions were recorded by both self-report and facial reactions (filmed by a hidden camera). The number of thoughts generated by participants and the time it took them to evaluate the cartoons were also recorded.

Consistent with the assimilation hypothesis, when the cartoons were discrepant with the expectation and the participants made a global analysis of the cartoons (negative-expectation/overall-rating condition), the participants assimilated their ratings to their affective expectations (as measured by both self-report and facial reactions). However, contrary to prediction, the participants who were anticipated to contrast their reactions away from their expectations (negative-expectation/individual-rating condition) also assimilated the cartoons to their prior expectations. That is, even though these participants used an apparently more fine-grained analysis when examining the expectation-discrepant cartoons, the cartoons were still assimilated to the prior expectation. Finally, some evidence was found to support other aspects of Case 4. Specifically, participants in the negative-expectation/individual-rating condition spent more time evaluating the cartoons and also generated more thoughts about them than did participants in the other conditions.

In the above study, the researchers accumulated further evidence that people often assimilate affective experiences to affective expectations, but they were unable to find evidence to support the contrast-effect prediction made by the AEM. Why was no evidence found for contrast effects as predicted by the AEM? One explanation may be that
participants did not have an adequate opportunity to detect the discrepancy between their experience and expectation. Wilson et al. (1989) suggested that it may take overwhelming contrary information for a person to break away from a prior affective expectation. Indeed, previous research reports that people need a great deal more information to reach a preference-inconsistent as opposed to a preference-consistent conclusion (Ditto & Lopez, 1992). Although having participants make individual rather than overall ratings was designed to create such a high-information situation, it still may not have exposed the participants to a sufficient amount of the expectation-discrepant information. Unfortunately, in this study there was no check to confirm that the participants in the individual-rating conditions did indeed pick up more information from the discrepant stimulus than participants in the overall-rating conditions. Thus, the strength of this test remains unclear.

Summary of the Early Affective-Expectation Research: Assimilation but Not Contrast Effects

In these and in other studies, researchers have amassed a considerable amount of evidence showing that people do frequently assimilate affective experiences to their prior expectations (e.g., Berkowitz & Thome, 1987; Fradkin & Firestone, 1986; Kirsch et al., 1983; Klaaren et al., 1994; Leventhal et al., 1979; Southworth & Kirsh, 1988; Tate et al., 1994; Wilson & Klaaren, 1992; Wilson et al., 1989). Consistent with the other predictions derived from the AEM, researchers have found that affective expectations influence the speed at which affective evaluations are made, the number of thoughts generated during these evaluations, behavior exhibited during an affective experience, and even judgments about repeating an experience (Berkowitz & Thome, 1987; Hodges et al., 1998; Klaaren et al., 1994; Wilson et al., 1989). However, none of the above studies produced evidence to support the prediction that when people notice a discrepancy between an affective
expectation and a stimulus, affective reactions will be contrasted from their prior expectation. This prediction is crucial to the AEM because without evidence for the contrast effect many of the results supporting the AEM model could be explained by a variety of alternative theoretical approaches. For example, cognitive-consistency formulations, such as dissonance (Festinger, 1957), balance (Heider, 1958), and congruity (Osgood & Tannenbaum, 1955) theories, suggest the possibility that the participants in the aforementioned studies were not truly assimilating their evaluations to their expectations, but were instead changing their interpretation of the experience to reduce any perceived inconsistency between what they expected to feel and what they were actually feeling. However, evidence showing that affective expectations can lead to both assimilation and contrast effects would be able to rule out such alternative explanations.

Recently, evidence supporting both the assimilation and contrast predictions of the AEM has been reported (Geers & Lassiter, 1999). Recall that in an earlier study, Wilson et al. (1989, Study 2) instructed some participants to analyze an expectation-discrepant stimulus in a more fine-grained manner than other participants. Wilson et al. hypothesized that individuals picking up a great deal of discrepant information would be more likely to notice the available inconsistencies in the stimulus and thus contrast their affective reactions away from their prior expectation. However, as mentioned, the lack of a manipulation check left the effectiveness of that technique unclear. Geers and Lassiter (1999) reasoned that an adequate test of the contrast hypothesis required a procedure in which people’s rate of information gain from an expectation-discrepant stimulus could be strongly manipulated and subsequently monitored. This would allow for an unambiguous test of the prediction that gaining more information from an expectation-discrepant stimulus can lead to contrast effects in affective experience. To achieve this goal, they
employed the unitization/behavior perception paradigm developed by Newtson (1973, 1976; Newtson, Hairfield, Bloomingdale, & Cutino, 1987).

**The Behavior Perception Paradigm**

Newtson (1973) has argued that perceivers actively regulate the information they extract from ongoing behavior by breaking up, or segmenting, the behavior into meaningful units of action. Newtson further suggested that perceivers can vary the strategies that they employ to extract information from events, and this variation in perceptual analysis in turn influences the amount of information perceivers obtain. Specifically, he hypothesized that the strategy of fine-unit analysis (i.e., breaking ongoing behavior into many small actions) leads to greater information gain than a strategy of gross-unit analysis (i.e., breaking ongoing behavior into a few large actions). According to Newtson, as the number of meaningful units of action extracted from a behavior sequence increases, the amount of uncertainty about that behavior sequence is progressively reduced. Newtson also suggested that when observers vary their perceptual strategy they can alter the type, or kind of information that they select from an event (e.g., Massad, Hubbard, & Newtson, 1979). That is, perceivers vary the particular actions that they identify as meaningful in an observed behavior (i.e., their unitization pattern). Thus, according to Newtson, the quantity as well as the quality of information obtained from a behavior sequence is dependent on the segmentation strategy employed by the observer during the act of perception.

The unitization technique developed by Newtson (1973) is used to measure such perceptual segmentation in the laboratory. Participants are instructed to watch a videotaped or filmed behavior sequence and to press a button (activating a counting device) whenever one meaningful action ends and a different one begins. This procedure allows researchers to determine the number of meaningful units of action and the temporal location of each action that a person registers from a behavior sequence. Another advantage of this
technique is that it permits variation in level of behavior analysis (fine or gross) to be manipulated by instructions (e.g., Lassiter, 1988; Lassiter, Stone, & Rogers, 1988; Newton, 1973) or to vary naturally due to situational and dispositional factors (Lassiter, Briggs, & Bowman, 1991; Lassiter, Geers, Apple, & Beers, in press; Lassiter, Geers, & Apple, 1999; Lassiter, Koenig, & Apple, 1996; Newton, 1973). Finally, the unitization technique has been found to be quite reliable (Newton, Engquist, & Bois, 1976) and easy for participants to understand and perform (Lassiter et al., 1999; Newton, 1976).

**Behavior Unitization and Information Gain**

A great deal of research supports Newton's hypothesis that the strategy of fine-unit analysis leads to greater information gain than the strategy of gross-unit analysis. For example, Newton (1973, Study 1) found that fine-unit perceivers formed more confident and differentiated impressions of an actor than gross-unit perceivers. In addition, other studies have shown that unexpected and unpredictable behaviors are unitized more finely than anticipated or predictable behaviors (Engquist, Newton, & LaCross, 1979; Markus, Smith, & Moreland, 1985; Newton, 1973, Study 2; Wilder, 1978a, 1978b). This increase in unitization rate for unpredictable behavior suggests that the perceiver is attempting to gain more information in order to reestablish predictability (cf. Heider, 1958). It has also been shown that perceivers employ finer levels of unitization when the behavior contains information that they are especially motivated to acquire, such as information of high subjective importance and personal interest (Hogue & Atkinson, 1989; Russell, 1979).

More direct evidence of the information-gain advantage of a fine-unit analysis can be found in studies examining the memorial consequences of employing different unitization strategies. Following from Newton's hypothesis, if fine-unit perceivers are extracting more information from events, they should also have a larger proportion of the available information stored in memory. In an initial test of this hypothesis, Lassiter et al.
(1988) systematically varied unitization rate, predicting higher unitization rates would lead participants to remember more action-related information. These researchers instructed participants to watch and segment a behavior sequence using either a fine, gross, or natural unitization strategy. Consistent with predictions, it was found that fine-unit analyzers remembered more information from the behavior sequence than natural unitizers, who in turn, remembered more from the sequence than did gross unitizers. Subsequent studies have consistently found that finer levels of behavior unitization enhance memory for action-related events (e.g., Hanson & Hirst, 1989; Lassiter, Geers, Flannery, & Ploutz-Snyder, 1998; Lassiter et al., 1996; Lassiter & Slaw, 1991; Lassiter et al., 1988).

Further evidence that finer levels of unitization are associated with greater information gain comes from an investigation on the personality construct of need for cognition. According to Cacioppo and Petty (1982; Cacioppo, Petty, Feinstein, & Jarvis, 1996), need for cognition is a stable individual difference in people's tendency to engage in and enjoy effortful cognitive activity. Individuals high in need for cognition are characterized by their propensity to seek out information and enjoy effortful thinking, whereas individuals low in need for cognition derive little pleasure from such activities. Lassiter et al. (1991) postulated that individuals high in need for cognition, in an attempt to maximize their information gain, will tend to employ a finer level of unitization than individuals low in need for cognition. In support of this prediction, Lassiter et al. (1991; and later Lassiter et al., 1999 and Lassiter et al., 1996) demonstrated that individuals high in need for cognition tend to segment behavior sequences into more units and subsequently recall more actions from behavior sequences than individuals low in need for cognition (see Viswanathan, 1997 for a similar result using the Need for Precision Scale).

Behavior Unitization and Affect
Although most of the unitization research has investigated the effect of a perceiver's unitization strategies on different cognitive processes, there are also affective consequences of employing different unitization strategies. In an examination of the influence of different unitization strategies on affect, Lassiter and Stone (1984) drew upon earlier research suggesting that simply gaining more information about a stimulus can increase one's liking for that stimulus. This "positive habituation" effect (Berlyne, 1970) has been found across a variety of indices of knowledge acquisition such as recognition (Matlin, 1971) and implicit learning (Gordon & Holyoak, 1983). Based on this earlier research, Lassiter and Stone argued that finer levels of unitization, by virtue of maximizing information gain, should lead to greater liking of an observed other than gross levels of unitization. Consistent with this line of reasoning, several studies have shown that finer levels of unitization lead to greater liking as indicated by both behavioral and self-report measures (Jensen & Rottmeyer, 1986; Lassiter, 1988; Lassiter et al., 1999; Lassiter & Stone, 1984).

Evidence for Both Assimilation and Contrast Effects in Affective Experience

As the above review indicates, finer levels of unitization lead to greater information gain than do grosser levels of unitization. In addition, the unitization paradigm allows researchers to vary the amount of information individuals pick up during a behavior sequence. For these reasons, Geers and Lassiter (1999) tested the AEM's predictions concerning assimilation and contrast effects by use of the unitization paradigm. Specifically, it was hypothesized that when an expectation is discrepant with incoming information, an affective reaction may be partially dependent on the amount of expectation-discrepant information a person obtains from the stimulus. In this study, participants were asked to watch and unitize a relatively unfunny video. Half of these participants were given a positive expectation concerning the video whereas the other half received no
expectation (a manipulation check confirmed the effectiveness of this independent variable). Cross-cutting this expectation manipulation, half of the participants were instructed to unitize the video finely whereas the other half were instructed to unitize grossly. It was predicted that employing a strategy of fine-unit analysis when examining an expectation-discrepant stimulus would lead to participants gaining a great deal of inconsistent information from the stimulus, and as a result, would induce them to contrast their affective reactions with their expectation. Conversely, it was predicted that a gross-unit analysis of the expectancy-discrepant stimulus would cause participants to gain relatively little information from the stimulus, leading them to assimilate their affective reactions to their expectation.

This experiment included the following dependent measures. First, to confirm that the fine unitizers gained more information than the gross unitizers, participants’ unitization rates (i.e., the number of button presses) were recorded as well as their recall of the actions occurring in the film. Participants were also asked to list the thoughts they remembered having while they were watching the film clip. To measure affective reactions, three diverse measures of affect were obtained, including one relatively indirect affect measure.

An examination of the unitization-rate data revealed that the fine-unit participants identified more meaningful actions in the observed behavior sequence than did the gross-unit participants. Next, an analysis of the recall data revealed that the fine-unit participants recalled significantly more actions from the film than did gross-unit participants. Taken together, these results suggests that fine-unit participants segmented the film into more actions and picked up more information from the film clip than did the gross-unit participants. No other significant effects were obtained with these two variables.

Analyses of participants’ affective reactions clearly supported the predictions derived from the AEM across all three affect measures. As in earlier research, it was found
that when participants gain relatively little information from a discrepant stimulus (gross-unitization condition), having a positive expectation led to a more positive affective reaction than if no expectation was given. More important, however, when individuals were in a situation in which they were more apt to notice the discrepancy between the expectation and the stimulus (fine-unitization condition), a positive expectation led to a more negative affective reaction than if no expectation was given. Thus, the data revealed both assimilation and contrast effects in affective experience.

Correlational analyses of the affect and recall data further supported the notion that gaining more information from the expectation-discrepant stimulus led the participants to notice inconsistencies. Specifically, these correlational analyses showed that, regardless of participants' unitization condition, the more information positive-expectation participants recalled from the stimulus the more negative were their affective reactions. However, when the participants were given no expectation, the relationship between the amount of information recalled and their affective reactions was not significant. That is, as positive-expectation participants gained more information from the stimulus, their affective reactions became increasingly negative, whereas this significant relationship did not exist for the no-expectation participants.

Finally, the thoughts listed by participants were also analyzed. Although the pattern of means on this variable was in the predicted direction (i.e., the participants in the positive-expectation/gross unitization condition reported having fewer thoughts than any of the other groups), it was not significant.

For the first time, evidence for the predicted contrast effect was obtained, filling in the gap left by previous affective-expectation research. Why was evidence for contrast effects found by Geers and Lassiter (1999) but not in any of the previous affective-expectation research? One possible explanation is that the manipulation of information
gain used in earlier research (e.g., Wilson & Klaaren, 1992; Wilson et al., 1989)--the individual versus overall-rating manipulation--did not expose the participants to enough of the expectation-discrepant information. It may be that for affective expectations to lead to contrast effects, a great deal of exposure to the expectation-discrepant information is needed. Because there was no way to verify the information-gain manipulation used in the earlier Wilson studies, the effectiveness of that manipulation remains in question. In the Geers and Lassiter study, however, the unitization manipulation was indeed found to significantly alter the perceptual strategies used by the participants. Moreover, the unitization manipulation was also found to strongly influence the amount of information participants recalled from the film, with the fine-unit participants remembering more information from the expectation-discrepant stimulus than the gross-unit participants.

A Consistency Explanation for The Affective-Expectation Research?

The Geers and Lassiter (1999) research has several notable implications for the AEM. First, the demonstration of the predicted contrast effect is important in that it allows the AEM to be more readily distinguished from other theoretical approaches. As mentioned earlier, many of the findings in the previous affective-expectation research could be accounted for by other theoretical frameworks such as a cognitive-consistency perspective (e.g., Festinger, 1957; Heider, 1958; Osgood & Tannenbaum, 1955). Although a consistency perspective could perhaps account for certain instances of expectation-induced assimilation, it cannot easily explain both the assimilation and contrast effects found by Geers and Lassiter (1999). Interpreting a portion of those results in terms of a consistency formulation, would, if nothing else, provide a less parsimonious explanation for the overall pattern of data.
A Demand Explanation for The Affective-Expectation Research?

It might also be argued that the results of the Geers and Lassiter (1999) study, as well as the results of previous affective expectation studies, were due to either demand characteristics or some kind of response bias. That is, perhaps the expectation manipulations did not affect the true experiences of participants, but only affected how the participants reported those experiences. Although such explanations cannot be ruled out entirely, they seem unlikely. First, as mentioned earlier, previous affective-expectation research (Wilson et al., 1989) used both self-report and behavioral measures to determine the affective reactions of the participants. In these studies, both the self-report and the behavioral measures yielded the same pattern of results. Similarly, in the Geers and Lassiter study, results obtained on a more surreptitious affect measure paralleled those found on more obvious affect measures. Second, demand explanations cannot again provide a parsimonious account for the Geers and Lassiter data. Although demand effects could account for either assimilation or even contrast, they cannot easily account for the demonstration of both in the same study.

Relating the AEM to Other Models of Assimilation and Contrast

The demonstration of both assimilation and contrast in affective experience also highlights the similarities between the AEM and other assimilation-contrast models. In the AEM, expectation-discrepant experiences are said to produce assimilation or contrast effects depending upon whether or not the perceiver notices the existing discrepancy. If the discrepancy goes unnoticed, assimilation effects should occur. If the inconsistency becomes apparent, reactions should be increasingly contrasted. In many ways, these predictions are similar to those made by other models of assimilation and contrast. For example, in the set/reset model (Martin, 1986), people are said to include prior information in their reactions (i.e., assimilation) unless the appropriateness of that prior information is
called into question by some factor, such as a lack of fit to the stimulus in question (Martin & Achee, 1992). When perceivers determine that this prior information is inappropriate for the current situation, they attempt to subtract away its influence, producing a contrast effect. It could be argued that in the Geers and Lassiter (1999) study, as the positive-expectation participants increased their segmentation rate, they gained more of the discrepant information which helped them become aware that the positive expectation was inappropriate for their current experience. As a result, as segmentation rates increased, reactions were more likely to be contrasted.

In other assimilation-contrast models it is argued that the amount of discrepancy between a prior expectation and a stimulus plays an important role in determining whether people assimilate or contrast their reactions to a stimulus (e.g., Herr, 1986; Higgins, 1989; Manis, Nelson, & Shedler, 1988; Schwarz & Bless, 1992; Sherif & Hovland, 1961). Many of these theories suggest that when a stimulus is viewed as sufficiently related to—or at least not discrepant from—an expectation, reactions will be assimilated. When there is little relation between the stimulus and the expectation, however, contrast effects are expected to occur. Indeed, a great deal of research demonstrates that the actual discrepancy between the prior expectation and the stimulus plays a large role in producing these differential effects (see Higgins, 1996).

The results of Geers and Lassiter (1999) fit in nicely with such theories of assimilation and contrast. When the participants did not notice that the affective valence of the stimulus was discrepant with the expectation, it was assimilated to the expectation. However, when they did notice that the valence of the stimulus was discrepant with the expectation, contrast effects emerged. Geers and Lassiter (1999) noted that their study differs from previous research in the way the discrepancy between the expectation and the stimulus was manipulated. Previous research has often focused on manipulating the
objective discrepancy between the expectation and the stimulus (e.g., Herr, 1986; Manis et al., 1988; Stapel & Winkielman, 1998; Winkielman, 1997; but see Thompson, Roman, Moskowitz, Chaiken, & Bargh, 1994). Geers and Lassiter (1999), however, manipulated participant’s subjective registration of this discrepancy. That is, instead of adjusting the extremity of the expectation or the extremity of the stimulus information, they manipulated the extent to which the participants attended to the available expectation-discrepant information. Therefore, a more general contribution of their research to the assimilation-contrast literature is that it demonstrates these differential effects can be produced by not only the manipulation of objective differences between an expectation and a stimulus, but also by the manipulation of people's subjective awareness of such differences. Geers and Lassiter (1999) suggested that a fruitful line of future research would be to examine when this and other subjective aspects of the perceiver are important in producing assimilation and contrast effects (cf. Schwarz & Bless, 1992, p. 233). Note that the present series of experiments can be viewed as an attempt to do just that. In this series of experiments, both individual differences and situational roles are used to determine the extent to which subjective variables invoke assimilation and contrast effects in affective experience.

Finally, one assimilation-contrast model in the social-judgment literature which suggests a slightly different interpretation for the Geers and Lassiter (1999) data has been recently proposed by Stapel and colleagues (Stapel, Koomen, & Van Der Plight, 1996; Stapel & Schwarz, 1998; Stapel & Spears, 1996). Stapel argues that prior expectancies can lead to both assimilation and contrast effects, depending upon the type of information that is accessible during an evaluation. Specifically, Stapel and Schwarz (1998) suggest that the influence of expectations on judgments is moderated by the ambiguity of the target information. According to Stapel and Schwarz (1998), in some cases, target information is “ambiguous,” whereas in other cases it is “mixed”. Targets are considered ambiguous
when they contain information that simultaneously imply discrepant evaluations. For example, a behavior that contains features that can be construed as either positive or negative would be an ambiguous target. Alternatively, a target is considered mixed when it is viewed as containing aspects that are contradictory. For example, a sequence of behaviors containing distinctly positive and distinctly negative actions would be considered a mixed target. The crucial difference between ambiguous and mixed targets is that ambiguous targets generate evaluative uncertainty whereas mixed targets hold contradictory features.

Stapel and Schwarz (1998) contend that ambiguous targets require interpretation and that people rely on expectancies to clarify them. Conversely, when evaluating mixed targets, people do not need to disambiguate the features of the target. Instead, people need to reconcile the consistent and inconsistent information. As would be expected by prior research concerning inconsistency resolution (e.g., Hastie, 1984; Hastie & Kumar, 1979), when examining a mixed target, people give greater attention to the expectation-inconsistent features. In these cases, judgments are anticipated to be based upon information that contradicts the prior expectation, resulting in people contrasting their judgments away from the expectation. In a series of studies, Stapel and Schwarz (1998) provided evidence for this model by the use of written trait descriptions. After participants were given an expectation, ambiguous descriptions were shown to lead to assimilation effects whereas mixed descriptions led to contrast effects.

In the above research, the stimulus targets were specifically designed to be either ambiguous or mixed. However, in many cases whether a target is perceived as ambiguous or mixed may depend upon how one attends to the features of the target. In the Geers and Lassiter (1999) study, for example, whether the target (i.e., the film clip) was perceived as ambiguous or as mixed could have depended upon the participant’s level of perceptual
analysis. That is, participants instructed to unitize finely may have recognized more details in the target and thus have been able to distinguish between the positive and negative features in the target. As a result, fine-unit participants could have recognized the mixture of positive and negative information in the film clip (i.e., construed it as a mixed stimulus) and contrasted their evaluations from the prior expectation. On the other hand, gross-unit participants received a less detailed account of the target and may have only viewed it in a more global and ambiguous fashion (i.e., construed it as a ambiguous stimulus). For this reason, gross-unit participants used their prior expectation to aid them in disambiguating the target information. Thus, the assimilation and contrast effects found by Geers and Lassiter may have been a result of the fine-unit participants perceiving the stimulus as a mixed target and the gross-unit participants perceiving it as ambiguous target.

In summary, the results of the Geers and Lassiter (1999) study are consistent with many assimilation-contrast models found in the social-judgment literature. At this time, however, we cannot be certain how similar the process of assimilation and contrast in affective experience is to the process of assimilation and contrast effects in social judgment (cf. Wilson et al., 1989). Moreover, because the Geers and Lassiter (1999) study is the only demonstration of contrast effects in affective experience, it is still unclear how prevalent expectation-induced contrast effects are in the domain of affect. What is clear, however, is that more research is needed to determine the extent to which these differential effects occur in affective experience.

What Underlies The Influence of Affective Expectations

The results of the Geers and Lassiter (1999) study also have implications concerning the possible mechanisms by which affective expectations influence affective experience. Wilson and his colleagues have suggested several such mechanisms, one of which is that of selective attention. A selective-attention account posits that "an
expectation could change the nature of the data base that makes up the affective reaction" (Wilson & Klaaren, 1992, p. 18). That is, affective expectations may alter the initial pool of information that individuals obtain from a stimulus. As a consequence, individuals with an affective expectation base their evaluations on a different set of information than individuals with no expectation. A second possible mechanism is what Wilson and colleagues refer to as a change-in-interpretation hypothesis. A change-in-interpretation account argues that affective expectations do not influence the pool of data that people obtain from a stimulus, rather people with an affective expectation interpret the stimulus information in a different way than people without an expectation. A third explanation, similar to the change-in-interpretation hypothesis, is what Wilson and colleagues refer to as the change-in-weighting hypothesis. Again, as in the change-in-interpretation hypothesis, people with an affective expectation or no expectation are believed to have access to the same pool of information from which to make their evaluation. However, instead of having different interpretations of the data, people with an affective expectation weigh the available information differently than individuals with no expectation.

Of these proposed mechanisms, the results of Geers and Lassiter (1999) seem most consistent with the selective-attention hypothesis. In this study it was found that, consistent with the selective-attention hypothesis, manipulating the amount of information people gain from an expectation-discrepant stimulus can effectively alter affective evaluations. Gross-unitization/positive-expectation individuals who gained less information from the stimulus, and consequently gained less expectation-discrepant information, assimilated their affective reactions to their prior expectation. However, participants in the fine unitization/positive-expectation condition, who obtained a larger pool of information from the discrepant stimulus, were more likely to evaluate the stimulus in a direction away from their expectation. The results suggest that creating differences in the pool of data an individual
has access to alters their evaluations of a stimulus. Also consistent with this explanation, Wilson et al. (1989) found that people who assimilated an experience to a prior expectation spent less time examining that stimulus than people without a prior expectation. Presumably, these individuals gained less expectation-discrepant information and thus had less information to challenge their prior expectation.

It should be noted, however, that the effects of affective expectations on affective experience may not only be due to a selective-attention mechanism. As suggested by Geers and Lassiter (1999), it may be that under different conditions, other mechanisms better explain the influence of affective expectations on affective experience. In some cases, for instance, recognizing that an affective experience is inconsistent with an expectation may be due more to how the expectation and the stimulus information are interpreted and organized by an individual (i.e., the change-in-interpretation hypothesis). In the first two studies described below, the influence of the affective expectations on affective experience was expected to occur because participants extract different information from the expectation-discrepant stimulus. However, in the third and forth studies, it was anticipated that the effect affective expectations would be determined more by participants’ interpretations than by the pool of information extracted from the expectation-discrepant stimulus.

**The Present Series of Experiments**

The main purpose of the present series of experiments was to extend the Geers and Lassiter (1999) research by further examining the circumstances in which affective expectations lead to assimilation and contrast effects in affective experience. That earlier work found assimilation effects when participants gave a cursory analysis to an expectation-discrepant stimulus whereas contrast effects were obtained when participants paid greater attention to the stimulus. The Geers and Lassiter work is important because it
was the first to show that affective expectations can generate both of these effects. Nevertheless, there are a number of issues yet to be addressed.

First, the unitization manipulation, although effective, is artificial. Rarely are people directly instructed to gain more or less information from a stimulus or experience. Therefore, it would be valuable if researchers could demonstrate that more real-world variables such as individual differences and relevant situational factors determine whether people assimilate or contrast affective experiences with affective expectations.

The above issue is crucial because, currently, the Geers and Lassiter (1999) study offers the sole demonstration of contrast effects as a function of affective expectations. It may be the case that only by instructing individuals to gain a large quantity of information from an expectation-discrepant stimulus can researchers obtain such contrast effects. That is, it may be that in everyday life assimilation effects are the norm, whereas contrast effects are virtually non-existent. Indeed, upon finding no evidence for contrast effects in their series of experiments, Wilson et al. (1989, p. 527) suggested that:

contrast effects may be rare in the affective domain. Despite the ease with which examples of contrast can be brought to mind . . . it simply may be the case that such effects are rare. That is, there may be a bias towards theory-driven processing, such that affective expectations generally lead to assimilation.

Based on the relative ease in which assimilation effects have been shown in this literature, it is not hard to understand how such a conclusion could be reached. Nevertheless, it should be recalled that a majority of the affective-expectation studies have not included variables which were anticipated to produce contrast effects in affective experience. Moreover, the Wilson experiments which did test for contrast effects (Wilson & Klaaren, 1992; Wilson et al., 1989, Study 2) relied upon a potentially ineffective manipulation.
Finally, in light of the Geers and Lassiter (1999) work, it seems that contrast effects can occur at least under stringent conditions. Therefore, further research is needed to delineate the conditions under which assimilation and contrast effects exist in affective experience.

The present experiments investigated several circumstances in which both assimilation and contrast effects in affective experience could be revealed. It was hypothesized that whether or not an individual notices that a stimulus is incongruent with a prior expectation depends, in part, upon various situational and dispositional factors. It was reasoned that individual differences and situational factors can, in some cases, increase the probability that people will notice that a stimulus is inconsistent with an affective expectation. Following the rationale of Geers and Lassiter (1999), it was predicted that these factors would then increase the likelihood of contrast effects in affective experience.

Also note that the following experiments tested for the moderating role of two variables that are not artificial, but quite common in real-world settings. Specifically, the first two experiments focused on the individual difference variable optimism - pessimism. The primary purpose of Study 1 was to demonstrate that, in general, optimistic individuals are prone to assimilate their affective reactions to an affective expectation, whereas pessimists are prone to contrast their reactions away from an affective expectation. Next, Study 2 was conducted to extend the findings of the Study 1 and to help rule out several alternative explanations for the obtained pattern of results. In the second set of studies (Study 3 and Study 4), a situational variable was manipulated. Specifically, participants in these studies were given different cognitive-tuning sets (i.e., communication roles). Based on the cognitive-tuning literature, it was predicted that participants told they were to communicate the content of a stimulus to another person would be more likely to contrast their affective reactions than individuals told that they were to receive further information about the stimulus. It was hypothesized that the results of these four experiments would
show that contrast effects are not “rare” in affective experience. Rather, it was anticipated that whether or not they occur depends upon various aspects of the situation and of the individual.

Optimism - Pessimism and the Affective Expectation Model

The goal of Study 1 and Study 2 was to extend the findings of Geers and Lassiter (1999) by the use of an individual-difference variable. Several studies in the social-judgment literature (e.g., Ford & Kruglanski, 1995, Study 2; Martin, Seta, & Crella, 1990, Study 3) have previously found that individual differences are important determinants of assimilation and contrast effects. The first two studies were conducted to test the possibility that assimilation and contrast effects in affective experience can result from the different responsivity that optimists and pessimists manifest when confronted with disconfirming or contradictory information. If successful, the results would be the first demonstration that other factors besides unitization instructions interact with affective expectations in evoking assimilation and contrast effects in affective experience.

Optimism - Pessimism

Optimism - pessimism is becoming one of the more researched concepts in psychology (Peterson, 2000). Recent interest in this construct stems largely from the association of optimism - pessimism with many physical and psychological health outcomes (e.g., Carver & Gaines, 1987; Carver, Pozo, Harris, Noriega, Scheier, Robinson, Ketcham, Moffat, & Clark, 1993; Chang, 1998; Chang & D’Zurilla, 1996; Davidson & Prkachin, 1997; Lin & Peterson, 1991; Peterson, Seligman, & Vaillant, 1988; Raikkonen, Matthews, Flory, Owens, & Gump, 1999; Scheier & Carver, 1985; Taylor, Kemeny, Aspinwall, Schneider, Rodriguez, & Herbert, 1992). Generally, this work finds pessimists to be at risk for poor health and optimists to be hardy (Geers, Reilley, & Dember, 1998). Numerous studies suggest that these results are, in part, due to the large number of coping
strategies used by optimists which help them persist under threatening and uncertain conditions. Optimists have been viewed as individuals who cope well with adversity and continue to strive towards an outcome even when progress is difficult or slow. Pessimists, on the other hand, are said to be poor copers who disengage themselves from a goal when outcomes seem unattainable (Scheier & Carver, 1992). Thus, whereas optimists persevere when faced with adversity, pessimists tend to withdraw (for reviews, see Scheier & Carver, 1992; Peterson, Maier, & Seligman, 1993).

One way optimists cope with adversity is by using behavioral responses to alter their situation (Scheier, Weintraub, & Carver, 1986). This could involve, for example, visiting their doctor twice a year for a check up. However, the diverse repertoire of coping strategies held by optimists is not limited to behavioral responses. Instead, increased optimism has been related to the use of mental strategies that aid people in dealing with contradictory or undesirable information. Specifically, several lines of research converge in suggesting that increased optimism results in unrealistic, constructive, and illusory modes of thinking (Akhtar, 1994; Armor & Taylor, 1998; Bier & Connell, 1994; Epstein & Meier, 1989; Fournier, Ridder, & Bensing, 1999; Gollwitzer & Kinney, 1989; Janoff-Bulman & Brickman, 1982; Lazarus, 1983; Metcalfe, 1998; Park, Moore, Turner, & Adler, 1997; Scheier et al., 1986; Spirrison & Gordy, 1993; Taylor & Brown, 1988; Taylor & Gollwitzer, 1995; Tennen & Affleck, 1987; Weinstein, 1980; Weinstein & Klein, 1996; Weinstein & Lyon, 1999). For example, optimism has been associated with decreased scrutiny of undesired information, the discounting of unwanted facts when making evaluations, and the mental reconstruction of experiences to avoid contradictions (e.g., Dember, Martin, Hummer, Howe, & Melton, 1989; Gibson & Sanbonmatsu, 2000; Gollwitzer & Kinney, 1989; Metcalfe, 1998; Sanna, 1996; Scheier, et al., 1986; Spencer & Norem, 1996; Taylor & Gollwitzer, 1995; Taylor et al., 1992; Weinstein & Lyon, 1999).
Although these mental strategies may at first appear maladaptive, it has been argued that they help individuals continue in the face of contradictory or aversive information (e.g., Armor & Taylor, 1998; Scheier & Carver, 1992). As noted by Muraven and Baumeister (2000, p. 249), “[c]oping seems to involve processes that demand inhibition, such as blocking sensations, overriding thoughts, and stopping emotions, as well as shifting attention and denial.” Given that optimists are expert copers in a world containing many uncontrollable outcomes, it does not seem unusual that they often engage in unrealistic thinking to cope with information that contradicts or disconfirms their prior beliefs or expectations. Consistent with this notion, a recent examination of the underlying structure of optimism found unrealistic thinking to be a core component (Fournier et al., 1999).

Unlike optimism, pessimism does not induce people to see the world through rose-colored glasses (Epstein & Meier, 1989; Fournier et al., 1999; Gibson & Sanbonmatsu, 2000; Peterson et al., 1993; Spencer & Norem, 1996; Spirrison & Gordy, 1993; Taylor & Gollwitzer, 1995). Instead, pessimists appear to be more realistic while making evaluations than optimists. For example, in one recent study optimists and pessimists were asked to perform a simulated gambling task (Gibson & Sanbonmatsu, 2000). In an initial session, participants played 20 hands of blackjack and then were called back to the laboratory one week later to bet on one final hand. It was found that, whereas pessimists adjusted their bets based on their initial success or failure, optimists did not. Instead, optimists made bets independent of their initial performance. These data are consistent with the notion that pessimists are more realistic when making evaluations than optimists. Other data indicate that pessimists are also more sensitive to inconsistent information than optimists. In one relevant study, it was found that pessimistic individuals were able to catch a greater number of discrepancies while performing a proofreading task than more optimistic individuals (Spirrison & Gordy, 1993). These researchers suggested that, in comparison to more
pessimistic individuals, “naively optimistic persons tend to gloss over and ignore imperfections when possible” (Spirrison & Gordy, 1993, p. 633). Taken together, the above work supports the notion that, whereas optimists often rely on unrealistic thinking and overlook contradictory information, pessimists are realistic thinkers who are responsive to discrepant information.

Overview for Study 1 and Study 2

Study 1 and Study 2 were conducted to explore the potential role that optimism - pessimism plays in moderating the effect of affective expectations on affective experience. The primary hypothesis was that optimists would be less likely than pessimists to detect and accept information that contradicts a specific affective expectation. As a result, it was predicted that optimists would assimilate expectation-inconsistent experiences towards a prior expectation, whereas pessimists would contrast expectation-inconsistent experiences away from a prior expectation. Additionally, it was anticipated that both optimists and pessimists would assimilate their affective reactions towards an expectation-congruent experience. If the results support these predictions, these data would be the first to show that individual differences can moderate the effect of affective expectations on affective experience. Additionally, this would be only the second demonstration of expectation-induced contrast effects in affective experience as predicted by the AEM.

The present studies also have the potential to advance our understanding of the individual-difference variable optimism - pessimism in three ways. First, to date, researchers have found few individual-difference variables to be instrumental in producing assimilative and contrastive reactions (e.g., need for cognition, Martin et al., 1990). It was anticipated that the current set of experiments would reveal optimism - pessimism can, under certain conditions, yield these differential effects. In Study 1, the extent to which optimism - pessimism produced assimilation and contrast on measures of affect was
investigated, whereas Study 2 attempted to demonstrate these effects on measures of both affect and behavioral intentions.

Second, it was hoped that the data would increase our understanding of the affective lives of optimists and pessimists. Specifically, studies investigating affect and optimism - pessimism generally report optimism to be associated with positive affect and pessimism with negative affect (e.g., Aspinwall & Taylor, 1992; Chang, Maydeu-Olivares, & D’Zurilla, 1997; Dember & Brooks, 1989; Dember et al., 1989; Natali-Alemany, 1991; Raikkonen, et al., 1999; Scheier, Mathews, Owens, Magovern, Lefebvre, Abbott, & Carver, 1989; Segerstrom, Taylor, Kemeny, & Fahey, 1998). However, it seems unlikely that this relationship holds constant across all situations. Instead, there are likely cases when optimism is associated with as much or even more negative affect than pessimism. In Study 1 and Study 2, I investigated the possibility that affective expectations are important in determining the affective reactions formed by optimists and pessimists, thus showing that optimism is not always associated with positive affect, and in some cases, pessimism is associated with more positive affect than optimism.

Finally, the following two studies are the first to investigate how optimists and pessimists respond when they have been provided with a specific expectation. In a number of prior studies, both specific expectations as well as optimism - pessimism have been assessed (e.g., Aspinwall & Brunhart, 1996; Davidson & Prkachin, 1997; Geers, 2000; Gibbons, Blanton, Gerrard, Buunk, & Eggleston, 2000; Scheier et al., 1989; Segerstrom et al., 1998; Taylor et al., 1992), with generally weak or no association being reported between the two (Armor & Taylor, 1998). In these previous studies, however, specific expectations were measured and not manipulated by the experimenters. In the following two experiments, expectations for a specific experience were directly manipulated. This new avenue of research is important because in many cases, individuals do not generate
their own expectations. The situation created in these experiments is akin to real life, in which a friend, stranger, or physician imparts an expectation to an individual. Additionally, as noted above, the correlation between specific expectations and optimism - pessimism is weak, suggesting that an individual’s level of optimism - pessimism is often not responsible for the specific expectations he/she carries (cf. Scheier et al., 1989). Based on the affective-expectation research reviewed earlier (e.g., Geers & Lassiter, 1999; Klaaren et al., 1994; Wilson et al., 1989), it was anticipated that the affective reactions of optimists and pessimists would be greatly affected, albeit sometimes in different directions, by giving them a situation-specific expectation.

Study 1

In Study 1, individuals varying in their level of optimism - pessimism watched the relatively unfunny film clip previously used by Geers and Lassiter (1999). Prior to viewing this film clip, participants received either a positive, negative, or no expectation. As in the Geers and Lassiter (1999) experiment, the positive-expectation participants were put into a situation in which their actual experience was incongruent with their prior expectation. Because optimists are more likely to gloss over contradictions than are pessimists, it was hypothesized that they would not recognize the expectation-discrepant information available in the unfunny film clip. Therefore, it was predicted that the optimists would assimilate their affective reactions towards the positive expectation (i.e., increase their positive affect relative to the no-expectation condition). Pessimists, on the other hand, are more sensitive to inconsistent information than optimists. For this reason, it was predicted that when given the positive expectation, pessimists would be more likely than optimists to notice the expectation-discrepant information in the film clip. Following the hypotheses of the AEM, it was thus predicted that pessimists would contrast their affective reactions from the positive expectation (i.e., decrease their positive affect relative to the no-expectation
condition). Together these hypotheses predict a significant interaction of expectation and optimism - pessimism on affective reactions between the no-expectation and positive-expectation conditions.

Whereas the positive-expectation condition provided a situation in which the expectation was inconsistent with the actual experience, the negative-expectation condition provided an opportunity to examine a situation in which the valence of the expectation was consistent with that of the actual experience. According to the AEM, when an affective expectation is congruent with an affective experience, people rely heavily on the expectation and little on the actual experience in forming their affective reaction. Additionally, because there should be little expectation-discrepant information available in this case, it was anticipated that optimistic and pessimistic individuals would respond in relatively the same manner. That is, it was hypothesized that they would both assimilate their affective reactions towards the negative expectation.

Finally, based on the previous optimism - pessimism research, it was unclear how optimism - pessimism would relate to affective reactions in the no-expectation condition. Because increased optimism has often been associated with positive affect (e.g., Dember et al., 1989; Geers, 2000; Segerstrom et al., 1998), it might be anticipated that optimists would find the film clip to be more enjoyable than pessimists in this condition. Alternatively, it could also be anticipated that optimists receiving no affective expectation would attend to the stimulus and recognize the relatively negative valence of the film clip. If this were the case, it should be expected that both optimists and pessimists would react negatively to the somewhat unfunny film clip.
Method

Participants

Participants were 122 male and female Ohio University undergraduates who participated individually for partial course credit. Participants were randomly assigned to receive either a positive, negative, or no expectation for a to-be-viewed film clip.

Procedure

Upon arrival, participants were seated at a desk in front of a video monitor and informed that they would be watching and evaluating a video segment. Participants were then given a set of written instructions (used previously by Geers & Lassiter, 1999) which explained that this study was concerned with the psychology of film appreciation. At this point, the instruction sheets (see Appendix A) diverged depending on the expectation condition to which the participant was randomly assigned. The instructions given to the positive-expectation participants informed them that, "In this study you will watch a portion of a classic movie that is very popular. The particular movie that you are about to see has won many awards and has received much praise from other students." The instructions given to the negative-expectation participants inform them that, "Although the particular movie that you are about to see has been described as boring and tedious by other students, it only lasts approximately 5 minutes." Participants in the no-expectation condition did not receive either of these additional pieces of information.

Next, all participants were then told that, in order to get more information about students' opinions of the film clip, the experimenter was going to randomly select a few participants to return and describe their thoughts concerning the film which would be recorded on videotape (no students were actually called back). The positive-expectation and the negative-expectation participants were additionally told that, to help them understand what they would be doing if they were called back to a second session, the
experimenter was now going to show them a short clip from a prior call-back video. At this time, the positive-expectation participants viewed a 30-s clip of a female undergraduate discussing the film and commenting on how much she liked it. During this time, the negative-expectation participants watched a 30-s clip of a female undergraduate discussing the film and commenting on how much she disliked it. Both expectation manipulations were, therefore, created by two pieces of information: written instructions telling them that the film would be enjoyable/unenjoyable and by a video clip in which a fellow student comments on how much she liked/disliked the film. Prior research (Geers & Lassiter, 1999) has found this positive-expectation manipulation to be quite successful at altering affective expectations. To determine if this method of inducing a negative-affective expectation was effective, a small pilot study was conducted. In this pilot study, 25 students were randomly assigned to either a negative-expectation condition using the procedure explained above, or to a no-expectation condition. The students in the negative-expectation condition reported (on a 9-point scale) having a less positive expectation for a to-be-viewed film \( (M = 3.00) \) than the no-expectation students \( (M = 4.71) \), \( t (23) = 2.75, p < .05. \)

Next, all participants watched the same 6-min clip of a black-and-white silent comedy entitled Don't Shove. Although the whole film lasts approximately 20 min, a portion of the movie that is able to stand on its own was selected for the experiment. In pretesting, when asked to rate how much they liked this film clip (on a 9-point scale), students rated this particular segment below the midpoint of the scale \( (M = 4.21) \). This not-so-funny film clip was chosen because prior work (Geers & Lassiter, 1999) suggests that the clip provides enough discrepant information so that positive-expectation participants can definitely notice inconsistencies between their expectations and the actual stimulus, while at the same time, it is not blatantly inconsistent with such expectations.
Dependent measures. After viewing the film clip, participants completed a series of tasks from which three measures of affect, used previously by Geers and Lassiter (1999), were obtained. First, participants received a brief 7-item questionnaire which instructed them to respond to all of the items and assured them that their ratings would remain anonymous (see Appendix B). The first three items on the questionnaire concerned participants' affective experience while watching the video and served as a measure of global affective reactions. These global affect questions (adapted from Klaaren et al., 1994) were "How much did you enjoy watching this video?" (1 = not at all, 9 = very much), "How funny do you think the film was?" (1 = not at all, 9 = very funny), and "How pleasant of an experience was it to watch this film?" (1 = not at all pleasant, 9 = extremely pleasant). Following Geers and Lassiter, responses to these items were averaged together to create a global affect index (Cronbach's [1951] alpha = .92).

The next three items on the questionnaire were filler items consistent with the cover story (e.g., “On average, how many times a month do you go to a movie theater?”). The final item on the questionnaire read: "How much did you think you would enjoy the video after it was explained to you, but before the movie came on?" (1 = not at all, 9 = very much). This question was included to verify that the expectation manipulation did indeed alter affective expectations.

After participants finished the questionnaire, they were asked to write down as many of the actions from the film as they could remember (see Appendix C). When participants indicated that they were finished with the recall task, the experimenter instructed them to rate each of the actions on their list as either funny or not funny. Whereas the self-report questions were used to assess global affective reactions, we used this procedure to assess participants' more specific, item-by-item affective reactions to the
film clip. To examine these data, the actions rated as not funny were subtracted from the actions rated as funny for each participant to create a specific affect index.

The participants were then given another sheet of paper and were asked to list any thoughts that they remembered having while they watched the film clip (see Appendix D). Participants’ thoughts were subsequently coded for valence to serve as our third measure of affect.\(^2\) On the global affect index and the specific affect index, participants were directly asked by the experimenter to label, or classify, their affective experience. With this third affect measure we attempted to tap into spontaneously generated, or unprompted, affective reactions. For each participant, the number of negative thoughts generated was subtracted from the number of positive thoughts generated to create an unprompted affect index. Thus, consistent with Geers and Lassiter (1999), we used three distinct procedures to assess affect, one more global, one more specific, and one more surreptitious.

After the thought-listing task, participants completed a brief packet of questionnaires. Embedded in this packet was a measure of optimism - pessimism, the Revised Life Orientation Test (LOT-R; Scheier, Carver, & Bridges, 1994; see Appendix E). This instrument consists of six self-report items (plus four filler items), each rated on a five-point scale ranging from 0 (strongly disagree) to 4 (strongly agree). To calculate optimism - pessimism scores, three negatively worded items are reversed scored and then all six items are summed. The internal consistency for the LOT-R in the present sample was sufficient, alpha = .82; scores ranged from 4 to 23 with higher numbers reflecting greater optimism.

After participants were done filling out the questionnaires, the experiment was concluded and participants were debriefed and thanked for their participation.
Results

Manipulation Check

To verify the expectation manipulation, responses to the expectation question were entered into a hierarchical-regression analysis. First, participant’s LOT-R scores and expectation condition were included in the regression equation as predictor variables. Next, the interaction of these two variables (created by multiplying them together) was added into the regression equation. This analysis revealed only a significant main effect of the expectation manipulation, $F(2, 117) = 22.28, p < .0001$. The positive-expectation participants expected to enjoy the film clip more than the no-expectation participants who, in turn, expected to enjoy the film clip more than the negative-expectation participants (beta = .40).

Affective Reactions

An examination of the three affect measures revealed that, as in the Geers and Lassiter (1999) study, they were highly interrelated. Therefore, to examine the effect of the expectation manipulation and optimism - pessimism on participants’ affective reactions, the scores on the three affect variables were standardized and then summed to yield a combined affect index (alpha = .75). To test the specific predictions derived from the AEM, scores on this combined affect index were subjected to two separate hierarchical-regression analyses. The first of these analyses was conducted to compare the affective reactions of the positive-expectation participants to those of the no-expectation participants. In this analysis, participant’s LOT-R scores and expectation condition were included in the regression equation as predictor variables (the expectation-condition factor was effect coded as 1 = positive expectation, -1 = no expectation, and 0 = negative expectation). Next, the interaction of these two variables (the multiplicative term) was added into the regression equation. Neither the expectation manipulation nor optimism - pessimism
scores were significant predictors of affective reactions. However, when the interaction of optimism - pessimism and the expectation manipulation was entered into the equation, it was found to be a significant predictor, $F(1, 118) = 5.16, p < .05$ (beta = .97). Figure 1 presents the regression lines for all three expectation groups across the observed values on the optimism - pessimism scale. As predicted, for the positive-expectation participants, affective reactions became more positive as level of optimism increased (i.e., an assimilation effect) and more negative as level of pessimism increased (i.e., a contrast effect) (as compared to the no-expectation condition).

Next, a second hierarchical-regression analysis was conducted to compare the affective reactions of the negative-expectation participants to those of the no-expectation participants. Again, participant’s LOT-R scores and expectation condition were entered in the regression equation followed on a second step by the interaction of these two variables (in this second regression analysis, the expectation condition factor was effect coded as 1 = no expectation, -1 = negative expectation, and 0 = positive expectation). This analysis yielded only a marginally significant effect of the expectation manipulation, $F(1, 118) = 3.45, p = .06$ (beta = -.17). These results indicate that the negative-expectation participants assimilated their affective reactions towards their expectation regardless of their level of optimism - pessimism.4

**Generated Thoughts**

Finally, the total number of thoughts listed by each participant were counted to yield a total thought score for each participant. Total thought scores were subjected to the same hierarchical regression analyses discussed above. These analyses produced no significant effects.5
Figure 1. Regression lines predicting affective reactions from expectation condition and level of optimism - pessimism in Study 1. Higher numbers indicate more positive affective reactions.
Discussion

The results of Study 1 suggest that optimism - pessimism is an important factor in determining when affective reactions will be assimilated towards or contrasted from an affective expectation. In line with the AEM (Wilson et al., 1989), when the experience was inconsistent with the expectation (i.e., the positive-expectation condition), individuals unlikely to notice and accept the expectation-disconfirming information--the optimists--assimilated their affective reactions to the expectation. Conversely, under these same conditions, individuals more sensitive to expectation-disconfirming information--the pessimists--contrasted their affective reactions away from the expectation. As noted earlier, only one prior study has been successful at obtaining both assimilation and contrast effects in affective experience as predicted by the AEM. These data thus add to the existing affective-expectation literature by being only the second demonstration that affective expectations can lead to both assimilation and contrast effects in affective experience. Importantly, they are also the first to show individual differences can moderate the effect of expectations on affective experience.

Study 1 also included a condition in which the affective expectation was congruent with the actual experience. As would be predicted by the AEM, affective reactions in this condition were assimilated towards the expectation. This result is consistent with Wilson et al.'s (1989) notion that when no discrepancy exists between an affective expectation and an experience, people rely heavily on the affective expectation to generate their affective reaction. Importantly, this decrease in positive affect occurred for both optimists and pessimists. This latter result helps to rule out a potential alternative explanation for the contrast effect found in the positive-expectation condition. Specifically, without the negative-expectation condition, it might be argued that greater pessimism always leads to contrastive reactions. It could be suggested, for example, that pessimists are dispositionally
more disagreeable or reactive (Dowd, Milne, & Wise, 1991; Kelly & Nauta, 1997) than optimists. Thus, individuals high on pessimism may be more likely to push against any expectation they receive, be it positive or negative. As a result, it may be that when pessimists are given a situational expectation, they naturally adjust their affective reactions away from that expectation. This pessimism - reactivity explanation for the contrast effect found in the positive-expectation condition, however, cannot account for the finding in Study 1 that both optimists and pessimists assimilated their affective reactions towards an expectation-congruent experience (i.e., the negative-expectation condition). Therefore, the results of Study 1 seem consistent with the literature reviewed earlier suggesting that optimists and pessimists differ in their responsivity to contradictory information and seem inconsistent with the view that pessimists indiscriminately reject affective expectations.

Finally, in this study the total number of thoughts listed by participants was not strongly influenced by the either the affective-expectation manipulation or optimism - pessimism scores. It should again be noted that this measure has failed to yield significant effects in a number of previous affective-expectation studies (e.g., Geers & Lassiter, 1999; Wilson & Klaaren, 1992).

Study 2

The results of the first study suggest that optimism - pessimism is an important factor in determining when affective experiences will be assimilated to or contrasted away from an affective expectation. The current explanation for Study 1 implies that pessimists should, in general, be more likely than optimists to notice expectation-inconsistent information that can disconfirm an affective expectation. Unfortunately, the experimental design of Study 1 cannot rule out all potential alternative explanations for the obtained data. Two of these potential alternative accounts are explained below. The main objective
of Study 2 was to provide further evidence for the current interpretation of Study 1 and to address the following two alternative explanations for the present results.

A Pessimism - Dysphoria Perspective

The first alternate explanation will be referred to as the “pessimism - dysphoria perspective”. This account, although not entirely incongruent with the AEM, is inconsistent with the interpretation of Study 1. The current interpretation for the first study is that pessimists are more likely to attend to expectation-inconsistent information than optimists. Thus, it is suggested that optimists and pessimists do not largely differ in the quantity of stimulus information they acquire from an expectation-discrepant stimulus, but instead, differ in the type of information they acquire. Although this explanation is consistent with the optimism - pessimism literature mentioned earlier, it is not the only possible explanation for why these effects occurred.

For example, it might be argued that pessimists contrasted their affective reactions because they are more likely than optimists to engage in a thorough analysis of incoming stimulus information. That is, perhaps pessimists are generally more apt than optimists to scrutinize their environment. This alternative interpretation arises from research reporting that dysphoric individuals use a more systematic and effortful mode of processing than non-dysphoric individuals (e.g., Bless, Bohner, Schwarz, Strack, 1990; Edwards & Weary, 1993; Schwarz, Bless, & Bohner, 1991). An explanation for the finding that dysphorics use a more effortful mode of processing is provided by the Feelings-As-Information Model of affect (Schwarz, 1990). This model argues that feeling states serve an informative function. The function of negative-feeling states is to signal to individuals that there is something wrong in their environment requiring attention. For this reason, individuals in negative moods increase their effortful processing to remedy the current mood-eliciting problem. If pessimism is similar to a dysphoric-mood state, then this might shed light onto
the results of the first study. That is, an alternative explanation for the data could be that pessimists, similar to dysphorics, are more prone to engage in effortful processing. This heightened level of processing, in combination with the inconsistent expectation, could have lead the pessimists to notice the discrepancy which existed in Study 1. It should be noted that prior research has indeed found optimism - pessimism to be moderately correlated with both depression (e.g., Carver & Gaines, 1987; Chang, 1996; Geers, Reilley, Dember, & Deronde, 1996; Scheier et al., 1994) and negative affectivity (Dember et al., 1989; Marshall, Wortman, Kusulas, Hervig, & Vickers, 1992; Natali-Alemany, 1991).

At this time, it is not entirely clear whether the results of Study 1 are due to the different type of information optimists and pessimists detect in an expectation-inconsistent stimulus, or to pessimists engaging in more effortful processing than optimists. However, some initial data relevant to this alternative account can be found in the results of the first study. Recall that in Study 1, participants were asked to complete a memory task after watching the film clip. If the pessimism - dysphoria perspective is correct, the heightened level of processing of pessimists should have enabled them to recall more information from the film clip than optimists. In considering this alternative account, the total amount of information recalled in the first study was subsequently analyzed. These data showed no significant effects associated with optimism - pessimism ($F_s < 1$). Thus, the recall data from Study 1 cast doubt on the pessimism - dysphoria perspective. Nevertheless, it seems hasty to discount this compelling alternate perspective due to this preliminary data. Therefore, more evidence regarding the pessimism - dysphoria perspective is required.
A Matching Perspective

My explanation for Study 1 suggests that pessimists should, in general, be more likely than optimists to notice when an experience disconfirms an affective expectation. However, it could still be argued that pessimists only contrast when they are given an affective expectation that is inconsistent with their tendency to anticipate negative events. In Study 1, pessimists contrasted their affective reactions away from a positive expectation. In this study there is no evidence, however, to suggest that they would also contrast their affective reactions away from a negative expectation. It may be that when pessimists receive a negative expectation for a positive experience, they have no need to reject this expectation because it fits their negative orientation. It may also be that when given a negative expectation for a positive experience, the tendency of optimists to anticipate positive events will be violated and thus they will contrast their affective reactions. Although in Study 1 optimists were shown to assimilate their affective reactions towards a negative expectation, it was much easier for them to assimilate than contrast in this condition because the experience was congruent with the negative expectation. However, if optimists are given a negative expectation for a positive experience, it may be that they will reject this expectation in favor of their typical orientation. Therefore, the results of Study 1 could also be explained by the notion that pessimists reject positive expectations that are inconsistent with a negative experience, whereas optimists reject negative expectations that are inconsistent with a positive experience.

Design of Study 2

Similar to Study 1, participants varying in their level of optimism - pessimism were given either a positive, negative, or no expectation for a to-be-viewed film clip. However, two main changes were made from the design of Study 1. First, instead of watching the relatively unfunny film clip used in Study 1, participants were asked to watch a somewhat
funny film clip. Thus, the valence of the film clip was changed from that of the Study 1 so that now the negative-expectation condition contained the expectation-discrepant information. Second, participants in Study 2 were also asked to perform the unitization task while they watch the film clip. Although Geers and Lassiter (1999) manipulated unitization by instructing some participants to unitize finely and others to unitize grossly, in Study 2, natural unitization strategies were measured. Thus, whereas Geers and Lassiter employed the unitization technique as an independent variable, unitization was used as a dependent variable in Study 2.

Recall that natural unitization has been found to systematically vary as a result of both situational and dispositional factors (e.g., Lassiter et al., 1991; Lassiter et al., in press; Lassiter et al., 1999; Lassiter et al., 1996; Newtonson, 1973). Unitization-rate data (i.e., the number of button presses) can be interpreted as a measure of the amount of information extracted from a behavior sequence (e.g., Hanson & Hirst, 1989; Lassiter et al., 1998; Lassiter et al., 1996; Lassiter & Slaw, 1991; Lassiter et al., 1988; Newtonson, 1973), whereas unitization-pattern data (i.e., the temporal location of the button presses) yields information concerning the particular aspects identified as meaningful in a behavior sequence (e.g., Cohen & Ebbesen, 1979; Lassiter et al., 1999; Lassiter et al., in press; Massad et al., 1979; Newtonson, Rindner, & Campbell, 1979). For instance, it has been found that individuals given the goal to learn an actor’s task identify different aspects of a behavior sequence as meaningful than individuals instructed to form an impression of the actor (Cohen & Ebbesen, 1979; Lassiter et al., in press). This finding, and others like it, suggest that unitization-pattern data is helpful in determining whether or not individuals are attending to the same aspects of a behavior sequence. Therefore, the unitization measure was included in Study 2 to help determine whether optimists and pessimists are differing in the amount or kind of information they extract from the film clip.
Predictions for Study 2

The following predictions were made for Study 2. Recall that in this study, participants were given either a positive, negative, or no expectation for a relatively funny film clip. Thus, it was the negative-expectation participants who were faced with an experience that clashed with their prior expectation. It was anticipated that, because optimists are less sensitive to contradictory information, individuals with high levels of optimism would assimilate their affective reactions towards the negative expectation (i.e., have less positive affect relative to the no-expectation condition). Pessimists, on the other hand, are more apt to recognize discrepant information. For this reason, it was predicted that pessimists in the negative-expectation condition would be more likely to notice the expectation-discrepant information in the film and thus contrast their affective reaction (i.e., have greater positive affect relative to the no-expectation condition). Based on the AEM, it was again anticipated that both optimists and pessimists would assimilate their affective reactions when they were given an expectation that was congruent with their actual experience (i.e., in the positive-expectation condition). Finally, as in Study 1, it was somewhat unclear how optimism - pessimism would be related to affective reactions in the no-expectation condition. In Study 1, level of optimism - pessimism did not significantly influence affective reactions in the no-expectation condition. Based on these data, it could be anticipated that optimism - pessimism would not impact affective reactions in the no-expectation condition in Study 2. However, because the stimulus in Study 2 is positive, it is also possible that optimists may react more favorably than their pessimistic counterparts when no expectation is provided.

One benefit of Study 2 is that it provides a strong test of the current hypotheses regarding optimism - pessimism and affective expectations because the predictions counter the typical finding concerning optimism - pessimism and affect. That is, as mentioned
earlier, previous studies report optimism to be associated with positive affect and pessimism to be associated with negative affect (e.g., Scheier et al., 1989; Segerstrom et al., 1998). However, the design of Study 2 leads to the prediction that, in the negative-expectation condition, increased optimism will be associated with negative affect and increased pessimism will be associated with positive affect. Such results would not only bolster the contention that optimists and pessimists differ in their sensitivity to expectation-disconfirming information, but would also provide important data concerning the relationship between optimism - pessimism and affect. Further, this pattern of results would, for the first time, demonstrate that the unrealistic thinking strategies employed by optimists can, under certain conditions, cause them to persist with a negative interpretation of a relatively positive experience.

Next, it was also hypothesized that optimist and pessimists differ in the kind, but not amount, of information they acquire from the expectation-inconsistent stimulus. To examine this hypothesis, an analysis was performed on the unitization-rate data as well as the unitization-pattern data. It was anticipated that optimists and pessimists would not differ in their unitization rates but would differ in their unitization patterns. These results would suggest that, consistent with the selective-attention hypothesis proposed by Wilson and Klaaren (1992) and also with the results of Geers and Lassiter (1999), differences in the pool of information individuals extract from a stimulus determines the impact of affective expectations on affective experience.

Finally, I also examined the amount of information participants recalled from the film clip. No recall differences were anticipated between optimists and pessimists.
Predictions from a Pessimism - Dysphoria Perspective

Study 2 was designed to help to determine the viability of two alternative interpretations of Study 1. One alternative interpretation for those data is that pessimists are similar to dysphoric individuals and engage in a more effortful mode of processing. Such an argument stipulates that in Study 2, pessimists should analyze the stimulus information in greater detail than optimists and thus should contrast their affective reactions in the negative-expectation condition. Additionally, this perspective predicts that optimists will engage in a less thorough analysis of the stimulus information and thus will assimilate their affective reactions towards the negative expectation.

The pessimism - dysphoria perspective predicts the same pattern of results on the affect measures as are anticipated by the main hypotheses. However, evidence concerning the viability of the pessimism - dysphoria perspective as an alternative hypothesis was obtained via the unitization and recall measures. As discussed earlier, the unitization measure detects both quantitative as well as qualitative differences in perceptual segmentation. This alternative perspective predicts that pessimists are similar to dysphoric individuals and engage in a more effortful processing of stimulus information than optimists. If this is the case, pessimists receiving a negative expectation should produce a higher rate of unitization than optimists (cf. Lassiter et al., 1996). This prediction is inconsistent with the main predictions for no unitization-rate differences between optimists and pessimists. Second, contrary to the main predictions, from the pessimism - dysphoria perspective there is no reason to anticipate unitization-pattern difference between optimists and pessimists in the negative-expectation condition. Thus, in direct contrast to the main hypotheses, the pessimism - dysphoria perspective anticipates unitization-rate but not unitization-pattern differences between optimists and pessimists.
Finally, the pessimism - dysphoria perspective would also expect that pessimists would recall more information from the film clip than optimists. This prediction is inconsistent with the main predictions as well as with the recall data obtained in Study 1.

**Predictions from a Matching Perspective**

The matching perspective does not argue that pessimists are generally more likely than optimists to contrast their affective reactions. Instead, from this account, both optimists and pessimists should contrast their affective reactions when they are provided with an affective expectation that conflicts with their typical positive or negative orientation. Therefore, the matching perspective predicts that, in Study 2, optimists will contrast their affective reactions in the negative-expectation condition and that pessimists will assimilate their affective reactions in the negative-expectation condition. Importantly, these predictions are in direct contrast with the main hypotheses.

Unlike the other two perspectives, the matching view makes no clear predictions concerning the results of the unitization measure or the recall measure.

**Subsidiary Changes to the Methodology of Study 2**

In addition to changing the valence of the stimulus video and including the unitization measure, the methodology of Study 2 differed from Study 1 in several other ways. First, instead of participants completing the optimism - pessimism questionnaire during the experimental session, scores on this instrument were obtained earlier in the quarter during a mass-screening session. This was done to eliminate a potential methodological confound that existed in Study 1. Specifically, in the first study, optimism - pessimism was assessed after the affective-expectation manipulation. It may be that, along with influencing affective reactions, the expectation manipulation in some way altered optimism - pessimism scores. Therefore, to preclude this possibility in Study 2, optimism - pessimism was measured prior to the experimental sessions.
Second, the expectation manipulation used in Study 2 was slightly altered from the one used in the first study. In that study (as well as in the Geers & Lassiter [1999] study), participants were told they might be called back later by the experimenter to discuss the film they were to view. Participants were told this to provide a cover for the expectation-manipulation video. Unfortunately, this procedure may have inadvertently changed the communication role of the participants. As will be discussed in more detail later, communication roles (such as expecting to transmit information to another person in the future) can systematically influence the information-processing strategy of an individual. Although this factor has been held constant across all conditions in the earlier studies, it could be argued that this factor limits the situations in which this research can be generalized (i.e., perhaps contrast effects can only be found when individuals expect to later describe the stimulus event to another person). For this reason, participants in the following three experiments were not informed that they may be called back by the experimenter. Instead, the expectation participants were simply told that the expectation video was being shown to give them more information about the film they were to watch. It should be noted that the potential influence of communication roles on affective experience was systematically investigated in Study 3 and 4.

Third, several ancillary self-report measures were included at the end of the experimental sessions. The first of these items simply asked participants to rate how similar the film clip was to their prior expectation. It was anticipated that pessimists given a negative expectation for the positive film clip would be the most likely of the participants to report that the film was inconsistent with their expectation. Additionally, as noted earlier, optimism has been associated with the mental reconstruction of contradictory information to form a more congruent experience. If this were the case in Study 2, it may be anticipated that optimists in the negative-expectation condition would judge the film clip
as even more consistent with their expectation than optimists receiving no expectation. This pattern of results would strengthen the current interpretation of Study 1 and would provide additional evidence against the two alternative perspectives discussed above.

Participants were also given two behavioroid measures (Aronson, Wilson, & Brewer, 1998) to complete. These items asked participants how willing they would be to take part in a similar study in the future and how much they wanted to see this particular film clip again in the future. These items were included for two reasons. First, I wanted to obtain some initial data on how affective expectations and optimism - pessimism influence behavioral intentions to repeat an experience. Second, the items were included to provide additional support that participants’ affective experiences are indeed being altered in the current series of experiments. As noted by Gilbert, Pinel, Wilson, Blumberg, and Wheatley (1998), people’s future actions are largely based on the emotional and affective consequence they associate with engaging in that behavior. Following this line of reasoning, if we are altering affective experience in the present studies, participants’ decisions on whether or not they want to repeat this event should mirror their affective-reaction data. Thus, it was anticipated that the responses to these behavioroid items would yield the same pattern of results found on the three affect measures.

Method

Participants

A large group of Ohio University introductory psychology students (N > 500) were asked to complete the LOT-R in a mass-screening session at the beginning of the quarter. One hundred and five male and female students were chosen randomly from this sample and contacted later in the quarter to take part in the study. Students participated individually in return for partial course credit. The internal consistency for the LOT-R in the call-back sample was sufficient, alpha = .84; scores ranged from 3 to 23.
Procedure

As in Study 1, participants were met upon arrival by an experimenter and seated at a desk in front of a video monitor. Participants were informed that they would be viewing and evaluating a video segment. At this time, the experimenter handed them a mouse button (attached to computer), briefly demonstrate how to operate it, and delivered the following instructions used in previous unitization studies (e.g., Lassiter et al., in press; Lassiter et al., 1996):

What I would like you to do is to firmly push the button whenever, in your judgment, a meaningful action occurs in the videotape you are about to see. Let me explain what I mean by that. Consider for example, the following behavior: I could get up, turn, walk over to a door, push the door closed, turn, walk back, and sit down. You could see each of these as discrete and meaningful actions. Or, you might see that same behavior as being composed of only three actions: getting up, pushing the door closed, and sitting down. Finally, you might see that behavior as only one action--that of closing the door. What I would like you to do as you view this videotape is to segment the behavior into whatever actions seem natural and meaningful to you. Simply press the button when, in your judgment, one meaningful action ends and another begins. As I said before, these should be whatever actions seem natural and meaningful to you. Let me stress that there are no right or wrong ways to do this. I am simply interested in how you do it.
After these instructions, participants watched and unitized a 30-s practice video. After the practice video was over, the experimenter checked to make sure participants were comfortable with the unitization procedure before continuing.

Next, the positive- and negative-expectation manipulations were administered. These manipulations were the same as those used in Study 1, with the exception that participants were not told they could be called back by the experimenter later in the quarter.

Before beginning the film, the experimenter briefly reminded the participant about the unitization procedure. At this point, all participants watched and unitized the same 5-min clip of the film *Benny and Joon*. Although the whole film is over an hour long, a small portion was selected for the experiment. In this section of the film, the main character performs a silent comedy routine. In pretesting, when asked to rate how much they enjoyed this film clip (on a 9-point scale), students (*N* = 20) rated this particular segment above the midpoint of the scale (*M* = 6.52).

**Dependent measures.** Immediately after the film presentation, participants were asked to complete the same dependent measures administered in Study 1. Specifically, these measures included the expectation-manipulation check and the three different affect indices: the global affect index (alpha = .90), the specific affect index, and the unprompted affect index. Following the completion of these instruments, participants were given a brief questionnaire to complete. This final questionnaire contained three critical items which were embedded among several filler items. The first critical item asked participants to judge how similar the main video was compared to what they expected it would be like. Responses on this item ranged from 1 (not at all) to 9 (very much). The other two critical items were added to determine the extent to which affective expectations and optimism - pessimism influenced behavioral intentions. The first of these items asked students to indicate how willing they were to come back to participate in a very similar study, whereas
the second item asked them how much they wanted to see the main video again in the future. Responses to both items ranged from 1 (not at all) to 9 (very much).

When participants were done filling out the last questionnaire, the experiment was ended and participants were debriefed and thanked for their participation.

Results

Manipulation Check

Responses to the expectation question were again entered into a hierarchical-regression analysis. As in Study 1, participant’s LOT-R scores and expectation condition were included in the first step of the regression equation followed by the interaction of these two variables on the second step. This analysis revealed only a significant main effect of the expectation manipulation, $F(2, 102) = 18.48, p < .0001$. Positive-expectation participants expected to enjoy the film clip more than the no-expectation participants who, in turn, expected to enjoy the film clip more than the negative-expectation participants (beta = .39).

Affective Reactions

To examine the effect of the expectation manipulation and optimism - pessimism on affective reactions, the scores on the three affect variables (which were again highly related) were standardized and then summed to yield a combined affect index (alpha = .78) as was done in Study 1. To test my specific hypotheses, scores on this combined affect index were subjected to the same two hierarchical-regression analyses used in Study 1. The first regression analysis compared the affective reactions of the negative-expectation participants to those in the no-expectation condition. In this analysis, participant’s LOT-R scores and expectation condition were included in the regression equation as predictor variables. Next, the interaction of these two variables (the multiplicative term) was added into the regression equation. Neither the expectation manipulation nor optimism -
pessimism scores were significant predictors of affective reactions. However, when the interaction of optimism - pessimism and the expectation manipulation was entered into the equation, it was found to be a significant predictor of affective reactions, $F(1, 103) = 7.43$, $p < .01$ (beta = .92). Figure 2 presents the regression lines for all three expectation groups across the observed values on the optimism - pessimism scale. As can be seen, when no expectation was provided, increased optimism was associated with more positive affective towards the relatively funny film clip. However, when the negative expectation was provided, this pattern was dramatically reversed. Specifically, affective reactions became more negative as level of optimism increased (i.e., an assimilation effect) and more positive as level of pessimism increased (i.e., a contrast effect).

A second hierarchical-regression analysis compared the affective reactions of the positive-expectation participants to those of the no-expectation participants. Again, participant’s LOT-R scores and expectation condition were entered in the regression equation followed on a second step by the interaction of these two variables. This analysis revealed only a significant main effect of the expectation manipulation, $F(1, 103) = 5.27$, $p < .05$ (beta = .22), with the positive-expectation participants experiencing more positive affect than the no-expectation participants (i.e., an assimilation effect). Finally, the affective reactions of the positive-expectation participants’ were virtually the same regardless of their optimism - pessimism scores.\(^7\)

Recall Data

The number of correctly recalled actions were counted to yield a total-recall score for each participant. The recall scores were then submitted to the same two hierarchical-regression analyses described above. As anticipated, these regression analyses yielded no significant effects ($F_s < 1.$).
Figure 2. Regression lines predicting affective reactions from expectation condition and level of optimism - pessimism in Study 2. Higher numbers indicate more positive affective reactions.
Unitization Analyses

The unitization-rate data (i.e., the number of button presses) were submitted to the same two hierarchical-regression analyses described earlier. As expected, these regression analyses also yielded no significant effects ($p > .1$).

Next, an analysis of participants’ unitization pattern data was conducted. To accomplish this, a pattern-analysis procedure used in previous unitization research (e.g., Lassiter et al., 1999; Lassiter et al., in press; Lassiter et al., 1996; Lassiter et al., 1988) was performed. Specifically, the 5-min film clip was first divided into 300 1-s intervals. Then, each interval was assigned a value of 1 if it contained a button press (i.e., if it had been judged to be meaningful) and the value of 0 if it did not. As in the aforementioned unitization studies, a subset of intervals was randomly chosen to be included to make the tests more conservative. This data was analyzed by use of between - within analyses of variance (ANOVAs), with Optimism - Pessimism and Expectation as between-subject factors and Interval as a within-subjects factor. The Optimism - Pessimism factor was created by performing a median split ($Mdn = 17$) on optimism - pessimism scores.

First, a 3 (expectation) x 2 (optimism - pessimism) x 60 (interval) mixed-effects ANOVA was conducted. The main effect of Interval and the Expectation by Interval interaction were both significant ($F_{[59, 5841]} = 6.97$ and $1.70$, $p < .01$, respectively). Together these results indicate that participants agreed on which aspects of the film clip were meaningful, and that which actions were viewed as meaningful different as a function of the expectation condition participants were assigned. This analysis yielded no significant effects associated with the Optimism - Pessimism factor. However, recall that optimism - pessimism was predicted to influence what information was obtained only when that information was inconsistent with an affective expectation. Therefore, it was anticipated that optimists and pessimists would only produce significantly different
unitization patterns in the negative-expectation condition. To test this specific prediction, I performed separate pattern analyses on each of the three expectation conditions (resulting in three separate 2 [optimism - pessimism] x 60 [interval] mixed-effects ANOVAs). Consistent with the above analysis, each of these three ANOVAs yielded a significant main effect of Interval (positive-expectation condition; $F_{[59, 1416]} = 2.12, p < .001$; negative-expectation condition; $F_{[59, 2006]} = 4.76, p < .001$; no-expectation condition; $F_{[59, 2124]} = 3.61, p < .001$). Importantly, Optimism - Pessimism did not interact with the Interval factor in either the positive-expectation condition or the no-expectation condition ($F$s < 1.). However, as predicted, Optimism - Pessimism did significantly interact with the Interval factor in the negative-expectation condition, $F_{(59, 2006)} = 1.41, p < .05$. These results demonstrate which particular intervals were selected as meaningful differed as a function of optimism - pessimism in the negative-expectation condition, but not in either the positive- or no-expectation conditions.8

Ancillary Measures

Who Noticed the Discrepancy? Recall that participants were asked to judge how similar the main video was to their expectation. This similarity item was submitted to the same two hierarchical-regression analyses described earlier. The first regression compared the responses made by the negative-expectation participants to those receiving no expectation. The first step of this analysis revealed that, overall, as level of pessimism increased, responses indicating that the film clip was not as expected increased, $F_{(1, 103)} = 5.43, p < .05$ (beta = .23). This main effect was qualified, however, by the anticipated Optimism - Pessimism by Expectation interaction, $F_{(1, 103)} = 5.85, p = .01$ (beta = .83). As can be seen in Figure 3, when given no expectation, optimism - pessimism scores had little effect on responses to this item. However, responses to this item were markedly influenced by optimism - pessimism scores in the negative-expectation condition.
Figure 3. Regression lines predicting similarity judgments from expectation condition and level of optimism - pessimism in Study 2. Higher numbers indicate judgments of greater similarity to the expectation.
Specifically, recognition of the discrepancy increased as level of pessimism increased and decreased as level of optimism increased. A second hierarchical-regression analysis comparing the responses of the positive-expectation and no-expectation participants on this measure revealed no significant effects.

**Behavioral Intentions.** Two items were also included to assess how the expectation manipulation and optimism - pessimism scores influenced the behavioral intentions of the participants. Separate analyses on these items yielded similar effects, therefore the two items were summed together to create a behavioral intention index. Responses on this index were submitted to the same two hierarchical-regression analyses described above. The first regression analysis, comparing the negative-expectation condition to the no-expectation condition, produced only a significant Optimism - Pessimism by Expectation interaction, $F(1, 103) = 8.59, p < .005$ (beta = 1.02). The pattern of this interaction was similar to that found on the combined affective index. In the no-expectation condition, as optimism increased, intentions to repeat this relatively positive experience also increased. However, this pattern was reversed in the negative-expectation condition. For participants in the negative-expectation condition, as level of optimism increased, intentions to repeat this experience decreased (see Figure 4). A second hierarchical-regression analysis compared the responses of the positive-expectation participants on this behavioral intention index to those receiving no-expectation. This analysis revealed only a marginal effect of the expectation manipulation indicating that the positive-expectation participants reported they were somewhat more likely to repeat this experience than the no-expectation participants, $F(1, 103) = 2.76, p = .10$ (beta = .16).
Figure 4. Regression lines predicting behavioral intentions from expectation condition and level of optimism - pessimism in Study 2. Higher numbers indicate greater commitment to repeat the experience.
Generated Thoughts. Finally, the total number of thoughts listed by each participant were counted to yield a total thought score for each participant. Although no specific predictions were made regarding the thought variable in the present study, the data were analyzed to examine the general prediction of the AEM that individuals assimilating to an affective expectation would produce fewer thoughts than individuals contrasting from an affective expectation. Total thought scores were subjected to the same hierarchical regression analyses discussed above. As in Study 1, these analyses produced no significant effects ($F_s < 1$).

Discussion

Study 2 demonstrated again that optimism - pessimism is an important moderator of the effect of affective expectations on affective experience. When no expectation was provided for the participants, affective reactions towards this relatively positive film clip increased as level of optimism increased. This effect can be interpreted as indicating that optimists, when provided with no affective expectation, enjoy a positive experience more than pessimists. However, this pattern dramatically reversed when an inconsistent expectation (the negative expectation) was provided. As predicted, when given a negative expectation for the somewhat funny film clip, pessimistic individuals contrasted their affective reactions away from the expectation. Conversely, when given a negative expectation, optimistic individuals assimilated their affective reactions towards the negative expectation, a pattern that deviated substantially from responses in the no-expectation condition. These results are consistent with Study 1 in indicating that, whereas increased optimism is associated with assimilating inconsistent affective experiences towards a prior expectation, increased pessimism is associated with contrasting inconsistent affective experiences away from a prior expectation. These results are incompatible with the matching perspective mentioned earlier which suggested that, when given the negative
expectation for the positive film clip, pessimists would assimilate their affective reactions and optimists would contrast their affective reactions. Additionally, the results of Study 2 allay concerns about a methodological confound in the present set of studies. Specifically, because optimism - pessimism scores were assessed prior to the experimental sessions, it cannot be argued that the interaction of affective expectations and optimism - pessimism emerged because the expectation manipulation in some way influenced participants’ responses on the LOT-R.

Study 2 also included a condition in which the valence of the affective expectation was consistent with that of the actual experience (the positive-expectation condition). As in Study 1, it was found that both optimists and pessimists assimilated their affective reactions to a congruent expectation. This finding supports the AEM and suggests that affective reactions are largely based on an expectation when the experience does not deviate substantially from that expectation. Additionally, as in Study 1, these data help rule out the possibility that the contrast effect in the expectation-inconsistent condition reflects some “knee-jerk” reaction of pessimists to reject any affective expectation. Instead, the results support the notion that pessimists contrast when they are presented with an experience that is inconsistent with an affective expectation, but not when they are presented with an experience that is consistent with an affective expectation.

Evidence was also provided concerning the mechanism by which optimists and pessimists assimilate and contrast their affective reactions. First, the unitization-rate data and the recall data suggest that the pessimists were not in a higher information state than optimists. These results are incompatible with the pessimism - dysphoria perspective described earlier. The fact that unitization-pattern differences did emerge between optimists and pessimists in the negative-expectation condition is also inconsistent with the pessimism - dysphoria perspective. However, the pattern-analysis data are consistent with
the main hypotheses. As predicted, optimists and pessimists were not attending to different aspects of the film clip when they were provided with no affective expectation or an affective expectation that was consistent with the stimulus information (i.e., the positive-expectation condition). However, when the stimulus was inconsistent with the affective expectation, optimists and pessimists did focus on different events in the film clip. These results are congruent with the hypothesis that, when confronted with a stimulus than contradicts a specific expectation, optimists tend to overlook inconsistencies whereas pessimists tend to focus on inconsistencies.

Further support for the current interpretation of Study 2 arises from the self-report item that asked participants how similar the film clip was to their prior expectation. Specifically, when given no expectation or an expectation that was consistent with their experience, participants’ optimism - pessimism scores did not significantly influence judgments of how similar the film clip was to their expectation. However, when the expectation was inconsistent with their experience, increased pessimism was associated with recognizing the discrepancy and increased optimism was associated with not recognizing the discrepancy. These results support the hypothesis that pessimists contrasted their affective reactions because they were more likely than optimists to detect and accept the expectation-disconfirming information present in the film clip. The finding that optimists rated the film clip as more similar to their expectation in this condition is consistent with the notion that optimists restructure disconfirming information to make it more concordant with their prior viewpoint. These additional data also cast doubt on the pessimism - dysphoria explanation for the present data. Specifically, from that account, there is no reason to expect optimists to find the film clip as more consistent with their expectation in the negative-expectation condition.
Study 2 also provides some initial evidence concerning the relationships among affective expectations, optimism - pessimism, and behavioral intentions. These data suggest that affective expectations and optimism - pessimism not only interact in producing affective reactions, but that they also interact in influencing a person’s intentions to repeat an experience. These data are consistent with prior research (Klaaren et al., 1994) which has found that affective expectations shape decisions to repeat an experience as well as affective reactions. Moreover, these data provide additional support that affective experiences were modified in the present experiment. Consistent with the assertion of Gilbert et al. (1998) that people’s actions are largely based on the affective consequence they associate with a future event, participants’ intentions to repeat this experience mirrored their affective-reaction data. Again, however, the influence of the affective expectation manipulation was moderated by individual differences in optimism - pessimism.

Finally, prior studies have shown that both positive and negative expectations can yield assimilation effects in affective experience (e.g., Berkowitz & Thome, 1987; Wilson et al., 1989; Klaaren et al., 1994). The only previous work to demonstrate expectation-induced contrasts effects in affective experience, however, demonstrated this effect by giving participants a positive expectation for a relatively unfunny stimulus (Geers & Lassiter, 1999). Thus, Study 2 is the first to reveal that, similar to positive expectations, negative expectations can also produce both assimilation and contrast effects in affective experience.

Discussion for Study 1 and Study 2

The AEM contends that affective experiences are generally assimilated to a prior expectation unless a discrepancy between the affective expectation and the actual experience exists and is noticed (Wilson et al., 1989). When a discrepancy is noticed,
affective experiences are expected to be contrasted away from a prior expectation. Only one previous study has successfully demonstrated that affective expectations can induce both assimilation and contrast effects in affective experience (Geers & Lassiter, 1999). In that work, the amount of information participants picked up from an expectation-discrepant stimulus was directly manipulated to produce both assimilation and contrast. The results of the two studies just presented demonstrate that similar effects can be obtained by tapping into the natural tendencies of optimists and pessimists to differ in their detection and acceptance of disconfirming information. That is, in the Geers and Lassiter (1999) study, as participants collected more information from the stimulus, presumably, they were more likely to notice the expectation-disconfirming information embedded in the stimulus. In the present work, recognizing the expectation-disconfirming information was produced by individual differences in optimism - pessimism. The data show that pessimism is associated with greater sensitivity to discrepant information as well as with contrasted affective reactions. Greater optimism, however, was found to be associated with less sensitivity to contradictory information and with the assimilation of affective reactions. As expected, optimism - pessimism scores did not influence affective reactions when participants were provided an expectation that was congruent with their affective experience. Taken together, these findings provide strong support for the AEM and also highlight the important role of individual differences in determining the impact of affective expectations on affective experience.

Implications for Research Concerning Optimism - Pessimism

A large body of work has previously found optimism - pessimism to relate to many psychological phenomenon such as, physical health, assertiveness, academic performance, business leadership, military leadership, religious commitment, risk taking, typical friendship duration, self-concept structure, and amount of social rejection received (Carver,
Kus, & Scheier, 1994; Carver, Reynolds, & Scheier, 1994; Davidson & Prkachin, 1997; Dember & Brooks, 1989; Geers et al., 1998; Peterson & Barret, 1987; Satterfield & Seligman, 1994; Scheier & Carver, 1985; Seligman, Nolen-Hoeksema, Thornton, & Thornton, 1990; Wunderley, Reddy, & Dember, 1998; for reviews, see Dember, in press; Scheier & Carver, 1992; Peterson et al., 1993). The current research adds to the burgeoning literature on optimism - pessimism by showing that it can play a pivotal role in how affective evaluations are formed. Moreover, the results include optimism - pessimism on a relatively short list of individual-difference variables found to produce assimilation and contrast effects. It should be noted that, although these differential effects were largely found on measures of affect in this research, a similar pattern was observed on measures of behavioral intentions in Study 2. These additional data suggest that optimism - pessimism does not only lead to assimilation and contrast effects in affective reactions, but that these effects also occur with respect to judgments of future behavior.

**Optimism - Pessimism and Affective Experience**

As reviewed earlier, when optimists are unable to cope with unwanted or disconfirming information by the use of behavioral responses, they tend to rely on unrealistic thinking strategies to adjust to or to accommodate that information. Pessimists, on the other hand, are receptive to contradictory information and tend to be more deliberate evaluators than optimists. The present data indicate that these different strategies used by optimists and pessimists strongly impact their affective reactions. Specifically, in two studies, optimists were found to assimilate relatively positive and negative experiences towards a prior expectation. These assimilation effects occurred regardless of whether the expectation was consistent or inconsistent with their actual experience. Pessimists, however, only assimilated to an affective expectation when that expectation was consistent with their experience. When the experience and expectation diverged, pessimists were
more likely to notice contradictions and to contrast their affective reactions away from the expectation. Importantly, these results indicate that optimism is not always associated with positive affect and pessimism is not always associated with negative affect. Instead, optimists’ and pessimists’ affective reactions seem to be swayed largely, and in some cases differentially, by affective expectations.

**Optimism - Pessimism and Specific Expectations**

The present experiments also add to research examining the relationship between specific expectations and dispositional optimism - pessimism. As mentioned earlier, other studies have measured specific expectations and correlated these expectations with optimism - pessimism scores (e.g., Geers, 2000; Scheier et al., 1989; Segerstrom et al., 1998; Taylor et al., 1992). The present work differs from previous studies, however, in that the specific expectations participants held were manipulated rather than simply measured. As noted earlier, although individuals may generate their own expectations for an event, they are often provided an expectation by other people or agencies. The present results demonstrate that giving optimists and pessimists an expectation can dramatically alter their affective reactions and behavioral intentions. Importantly, specific expectations do not simply yield a main effect for both optimists and pessimists, rather, specific expectations and optimism - pessimism can interact depending on the consistency between the specific expectation and the stimulus information. Considering the weak correlations found previously between optimism - pessimism and specific expectations, it may be advantageous for researchers in the future to examine the relationship between these two constructs by manipulating specific expectations. Moreover, the finding that the specific expectations of the optimists and pessimists were readily altered by the situationally-imposed expectations may provide an explanation for the weak correlations reported between optimism - pessimism and specific expectations in prior studies.
Perhaps the most theoretically interesting finding of the present set of experiments, in regards to optimism - pessimism, is that optimists given a negative expectation for a positive experience enjoy the experience less than pessimists in the same condition (Study 2). Thus, optimists held on to a prior negative interpretation of an event, even when the event was relatively positive in nature. This finding indicates that the unrealistic thinking strategies adopted by optimists may, in some instances, interfere with their capacity to fully appreciate the positive aspects of an experience. That is, these unrealistic mental strategies may sometimes serve to filter out not only incoming information that may be disconcerting (cf. Armor & Taylor, 1998), but also information of a pleasant nature. This implies a possible downside to optimism. Specifically, optimism may lead individuals to overlook the true valence of an experience which may in turn (as suggested by the behavioral intentions measure in Study 2), cause them to repeat negative, and to avoid pleasant, future experiences. The current data are not alone in reporting that the tendency for optimists to persist in the face of contradiction can lead to potentially negative outcomes. For example, as described earlier, Gibson and Sanbonmatsu (2000) found that pessimists adjust their bets on a gambling task based on past performance, whereas optimists persist in thinking they will do well regardless of their past performance. This prior study is similar to Study 1 in that both found optimists to persist with a positive expectation even after encountering contradictory information. It should be noted, however, that the results of Study 2 are unique in demonstrating that unrealistic thinking can lead optimists to persist with a negative interpretation of an event in the face of positive information. Thus, the mental strategies used by optimists may, in some cases, unwittingly cause them to construe a positive experience as negative. I hasten to point out, however, that these effects were obtained under conditions in which optimists could not easily alter their situation by the use of behavioral responses (e.g., walking out of the experiment). Instead, they faced an
experience that was largely out of their control, which likely facilitated their use of unrealistic thinking strategies (cf. Scheier et al., 1986). It should be noted however, that there are frequent real life situations in which behavioral options are limited, and thus a reliance on mental strategies to cope is likely necessary.

Although there are many implications for the current work, most notable are those for the literature concerning optimism - pessimism and health. As mentioned earlier, a great deal of research finds pessimists to be at risk for poor health and optimists to be hardy. The majority of this research, however, has not considered the role that situational expectations play in moderating the relationship between optimism - pessimism and health. Recent studies (Davidson & Prkachin, 1997), however, indicate that optimism - pessimism and situational expectations can have an interactive effect on health outcomes. Consistent with Davidson and Prkachin’s data, the current research suggests that situational expectations are an important moderator of the health-related experiences of optimists and pessimists. The present results imply, for example, that how an individual responds to a painful medical procedure may not depend upon their level of optimism - pessimism alone, but rather on the interaction between the individual’s affective expectation and level of optimism - pessimism. When investigating the reactions of optimists and pessimists to various health-relevant information, such as painful medical procedures or disturbing medical news, researchers may be well advised to take into account both optimism - pessimism as well as specific, situational expectancies.

Will pessimists always contrast their affective reactions away from an inconsistent expectation, and will optimists always assimilate their affective reactions towards an inconsistent expectation? Although likely under many conditions, it seems improbable that these effects will always occur. Instead, several factors may be particularly instrumental in determining whether or not this pattern of results is revealed. One factor that may prove
pivotal in moderating the relationship between optimism - pessimism and affective expectations is the characteristics of the individual transmitting the expectation. In the current set of studies, affective expectations were delivered to participants by a fellow undergraduate student. Although speculative, it may be that when the individual transmitting the expectation is viewed as unreliable or unlike the individual receiving the expectation, optimists will be less prone to overlook the available contradictory information. Additionally, although the expectations and experiences in the present experiments were indeed discrepant from one another, in some situations, the available contradictions may be even larger. When extreme discrepancies exist, it could be that optimists will no longer cling to an affective expectation (cf. Armor & Taylor, 1998). These potential qualifiers to the current work highlight the necessity for further research on these topics. As has been recently pointed out in separate summaries on situational expectations and on optimism - pessimism (Armor & Taylor, 1998; Peterson, 2000), greater effort is needed to explore the interplay between specific positive and negative expectations and individual differences in optimism - pessimism. Study 1 and Study 2 can be seen as an early step towards this goal.

The Situational Manipulation

Study 1 and Study 2 were both attempts to demonstrate that individual differences influence how affective expectations alter affective experience. The following two studies attempted to show that situational variables can also serve this moderating function. Specifically, these experiments investigated the potential interaction between cognitive tuning (communication roles) and affective expectations.

Cognitive tuning was chosen for the present set of studies for the following reasons. First, as will be described below, research suggests that this manipulation could be effective in producing assimilation and contrast effects in affective experience. Second,
manipulating cognitive tuning may create an opportunity in which affective expectations influence affective experience by a mechanism other than selective attention. Recall that in the previous two studies, affective expectations were proposed to influence affective experience in a manner consistent with the selective-attention account posited by Wilson and Klaaren (1992). That is, it was suggested that variations in the initial information selected from the stimulus determine the impact of affective expectations on affective experience. However, under different conditions, other mechanisms may influence the relationship between affective expectations and affective experience. Cognitive tuning may be one such case. Specifically, in the following two studies, it was anticipated that the effects of affective expectations on affective experience would result from a process more akin to Wilson and Klaaren’s (1992) change-in-interpretation hypothesis than to their selective-attention hypothesis. Finally, this situational manipulation was also chosen because, similar to optimism - pessimism, cognitive-tuning effects should be common in real-world settings.

**Cognitive-Tuning Theory and Research**

Effective social interaction relies on the successful exchange of information. Be it an office meeting, a debate with a colleague, a speech to an audience, or an intimate conversation with a close friend, people rely heavily on their ability to pass along information and to receive information from others. During many situations, as people gather information, they are anticipating passing along that information to someone else. For example, during an interaction with the boss, an employee may be anticipating that he or she will tell a fellow coworker about that conversation later in the day. The present research concerns how taking on the responsibility to relay information can alter one’s interpretation of a stimulus.
Zajonc (1960) originally proposed the notion that communication roles can change the interpretation of a message. Zajonc identified two principle positions in the process of communication, that of the transmitter and that of the receiver (Zajonc, 1960; Zajonc & Adelmann, 1987). Transmitters anticipate relaying information to others whereas receivers anticipate acquiring information from others. Zajonc maintained that receivers categorize information by generating a number of mental “files” in which to store new information. Transmitters, however, do more than simply file information. Zajonc argued that transmitters develop a more unified and organized cognitive structure to aid the retrieval of information (Hennigan, Cook, & Gruder, 1982). In the first cognitive-tuning experiment, Zajonc (1960) found that participants expecting to transmit information held a more unified and integrated representation of a communication than did expectant receivers. Zajonc’s work suggests that, in comparison to receivers, transmitters prepare to impart information to an audience by arranging a more clear and coherent cognitive representation of a communication.

Following Zajonc’s (1960) pioneering work, subsequent research has corroborated and extended his cognitive-tuning theory. For example, Cohen (1961) discovered that when the degree of internal contradiction in a list of information about an individual is high, it does not influence the impressions formed by receivers. However, when presented with contradictory information, the impressions made by the transmitters become increasingly polarized. Cohen (1961, p. 243) argued that “transmission requires a tight and well-bound cognitive ‘package’ which can be communicated to others.” He further suggested that contradictory information makes it more difficult for a transmitter to order a clear and unambiguous cognitive structure that can be passed on. For this reason, Cohen suggested that transmitters are more likely to generate more unified accounts than receivers. Cohen (1961, p. 243) contended that, in comparison to transmitters, receivers
“entertain a more flexible and ambiguous picture” which allows them to forestall their impression judgments.

Many subsequent studies have supported the notion that transmitters strive to develop a clear and organized impression of a communication (e.g., Boninger, Brock, Cook, Gruder, & Romer, 1990; Cloven, & Roloff, 1995; Gold & Cowles, 1973; Harkins, Harvey, Keithly, & Rich, 1977; Harvey, Harkins, & Kagehiro, 1976; Hennigan et al., 1982; Holt & Watts, 1969; Kaplan & Mohrman, 1977; Lassiter et al., 1999; Leventhal, 1962; Mazis, 1973; Watts & Holt, 1970; for a review, see Guerin & Innes, 1989). Importantly, studies have also consistently replicated Cohen’s (1961) finding that the differences between transmitters and receivers increase when they are presented with inconsistent or expectation-discrepant information (e.g., Holt & Watts, 1969; Leventhal, 1962; Harkins et al., 1976; Harvey et al., 1977; Watts & Holt, 1970). Moreover, this work suggests that transmitters are more sensitive to incongruencies in a communication. For example, in one study, Leventhal (1962) presented both transmitters and receivers with a positive description of a fictitious individual. Later, half of the participants were given additional information about this individual which was extremely discrepant from the first description (i.e., very negative). The other half of the participants read information that was only moderately discrepant from the first description (i.e., slightly negative). In comparison to receivers, transmitters impressions of that individual became significantly more unified and increasingly negative after the second set of information. Similar to Cohen (1961), Leventhal found that these effects were most pronounced in the extreme-discrepancy condition. Leventhal concluded that the goal of transmitters is to create a coherent interpretation of a message. When the message they are to relay contains internal inconsistencies, however, transmitters need to increase their effort to reduce the discrepancies and clarify the message.
In another set of studies, Harvey et al. (1976) hypothesized that, because transmitters are motivated to communicate a clear message, they make greater attributions of causality to plausible causal factors. Receivers, on the other hand, were described as having a more relaxed orientation towards interpreting events. For this reason, the researchers hypothesized that receivers make more moderate attributions of causality. In one of these studies (Harvey et al., 1976, Study 2), receivers and transmitters viewed a videotape of a teacher shocking a learner. Before participants watched the video, the researchers directly manipulated the expectations that participants had for the behavior in the videotape. Specifically, half the participants were informed that the teacher did not believe in causing distress to another person “in the interest of advancing psychological knowledge”. The other half of the participants were informed that the teacher believed that causing some distress to advance psychological knowledge was acceptable. Thus, the study consisted of a 2 (receiver vs. transmitter) by 2 (expectation-inconsistent condition vs. expectation-consistent condition) design.

The data revealed that transmitters in the expectation-inconsistent condition but not in the expectation-consistent condition made more extreme attributions of causality than receivers. These results were interpreted as evidence that unanticipated outcomes stimulate transmitters to develop a more definitive interpretation of an event, resulting in higher attributions of causality (Harkins et al., 1977). Harvey et al. (1976) further argued that when presented with expectation-discrepant information, transmission tuning but not reception tuning results in increased interpretive activity.

In another study, Harkins et al. (1977) provided a partial replication and an extension of the Harvey et al. (1976) research. In this experiment, transmitters made greater attributions of causality than receivers or no-tuning-instruction participants when presented with expectation-discrepant information. Additionally, Harkins et al. provided
data concerning the notion of Harvey et al. (1976) that transmitters engage in more interpretive activity when presented with information that is inconsistent with an expectation. Specifically, transmitters in the expectation-inconsistent condition reported spending more time thinking about what they viewed on the videotape than either receivers, controls, or the expectation-consistent transmitters. In line with the reasoning of Harvey et al. (1976), these researchers concluded that whereas a reception set is a more passive mental strategy in the face of inconsistencies, a transmission set often stimulates increased interpretive activity (for a similar conclusion in the realm of attitude change, see Boninger et al., 1990; Hennigan et al., 1982).

It should be noted that in the Harkins et al. (1977) study described above, participants were either given transmitter, receiver, or no tuning-set instructions. In this study, as in many others (e.g., Gold & Cowles, 1973; Harvey et al., 1976; Lassiter et al., 1999; Mazis, 1973; Watts & Holt, 1970), it was found that no-tuning-instruction participants respond similarly to those given receiver-tuning instructions. This finding suggests that it is largely the mental strategies of the transmitters and not the receivers that are altered by the tuning manipulation.

Summary of the Cognitive-Tuning Research

These and other studies support the notion that transmitters strive to develop a clear and unified message to pass along to an audience (e.g., Boninger et al., 1990; Hennigan, et al., 1982; Kaplan & Mohrman, 1977; Lassiter et al., 1999; Leventhal, 1962; Zajonc, 1960). Importantly, this effect is most pronounced when participants are presented with inconsistent or expectation-discrepant information (e.g., Cohen, 1961; Holt & Watts, 1969; Leventhal, 1962). The data suggest that these effects are due to the fact that expectation-discrepant information stimulates transmitters but not receivers to increase their level of interpretive activity (Harkins et al., 1977; Harvey et al., 1976). Finally, although cognitive-
tuning instructions have been shown to influence many different types of judgments such as attributions and person impressions, as of yet, no studies have demonstrated that they influence affective reactions.

**Cognitive Tuning and the Affective Expectation Model**

As stated earlier, the main objective for the following two experiments was to demonstrate that communication roles interact with affective expectations to produce assimilation and contrast effects in affective experience. Based on the cognitive-tuning literature, it was predicted that when presented with an experience that is inconsistent with a prior affective expectation, transmitters increase their cognitive activity to interpret a stimulus event. Therefore, when presented with a stimulus that is discrepant from an affective expectation, transmitters should recognize when a stimulus is inconsistent with a prior expectation. Receivers (and no-instruction controls), on the other hand, were not expected to increase their interpretive activity. Thus, it was hypothesized that transmitters, in comparison to receivers or no-tuning instruction participants, will attempt to secure a clear and definitive interpretation of the stimulus, notice that the stimulus is discrepant from their expectation, and thus contrast their affective reactions away from their affective expectation.

**Study 3**

Study 3 was conducted to test the possibility that cognitive-tuning sets interact with affective expectations in producing assimilation and contrast effects in affective experience. Participants received either a positive expectation or no expectation for a not-so-funny film clip. Cross-cutting this expectation manipulation, participants were given either a transmitter or a receiver set before watching the film clip. The dependent measures were the same as those used by Geers and Lassiter (1999).
Based on the cognitive-tuning literature and the hypotheses of the AEM, the following predictions were made. First, it was predicted that the transmitters would contrast their affective reactions away from the positive expectation (i.e., have less positive affect relative to the transmitter/no-expectation condition). Second, because prior cognitive-tuning studies which have included no-instruction conditions generally find that the responses of control and receiver participants do not differ (Gold & Cowles, 1973; Harkins et al., 1977; Lassiter et al., 1999; Mazis, 1973; Watts & Holt, 1970), it was predicted that the receivers would assimilate their affective reactions towards the positive expectation (i.e., have more positive affect relative to the receiver/no-expectation condition).

Finally, as in the prior two studies, the thought-listing data was also examined. Predictions derived from the AEM suggest that the positive-expectation transmitters would generate more thoughts than no-expectation participants, who in turn, would generate more thoughts than the participants in the receiver/positive-expectation condition.

**Method**

**Participants**

Participants were 51 Ohio University undergraduates. Each student participated individually in return for partial course credit. Before arrival, participants were randomly assigned to one of four conditions, resulting in a 2 (transmitter vs. receiver) by 2 (no expectation vs. positive expectation) factorial design.

**Procedure**

On arrival, participants were met by an experimenter and seated at a desk in front of a video monitor. Participants were informed that they would view and evaluate a video segment. Participants were then given either no expectation or a positive-expectation following the procedures used in Study 2.
Next, participants were either given receiver instructions or transmitter instructions. The tuning instructions were those used previously by Lassiter et al. (1999). Specifically, participants in the transmitter conditions were told the following:

After you watch the main videotape, I am going to bring in a student from another study and I want you to tell that person what you saw on the videotape. I just wanted you to know what was going to happen before we got started. Are there any questions?

Participants in the receiver conditions were told the following:

After you watch the main videotape, I’m going to bring in a student from another study. That student will give you more information about the main video. I just wanted you to know what was going to happen before we got started. Are there any questions?

Next, participants in both the transmitter and receiver conditions were asked to repeat the tuning instructions. If participants had problem repeating these instructions, they were read again until the participant demonstrated a firm understanding of what was to happen.

At this time, all participants watched the same 6-min clip of the black-and-white silent comedy entitled Don't Shove used in Study 1 and in Geers and Lassiter (1999).

**Dependent measures.** Immediately following the film presentation, participants were asked to complete the dependent measures used by Geers and Lassiter (1999). Specifically, these measures yielded a check on the expectation manipulation, three different affect indices (the global affect index \([alpha = .95]\), the specific affect index, and the unprompted affect index \(10\)), and the total number of thoughts generated by participants.
When participants indicated they were done filling out the questionnaires, the experiment was concluded and participants were debriefed and thanked for their participation.

**Results**

**Manipulation Check**

First, to check if the expectation manipulation was successful, data from the expectation-manipulation check was subjected to a 2 (transmitter vs. receiver) x 2 (no expectation vs. positive expectation) ANOVA. As anticipated, this analysis only revealed a significant main effect of the expectation manipulation, \( F(1, 47) = 15.85, p < .001 \). The positive-expectation participants reported (\( M = 6.36 \)) expecting to enjoy the film more than the no-expectation participants (\( M = 4.32 \)).

**Affective Reactions**

To examine the effect of the independent variables on affective reactions, the scores on the three affect variables were standardized and then entered into a 2 (transmitter vs. receiver) by 2 (no expectation vs. negative expectation) by 3 (affect measure: global affect index vs. specific affect index vs. unprompted affect index) between - within ANOVA. Standardized means for the overall affect measure are presented in Table 1. This analysis only yielded the predicted Expectation by Tuning Instruction interaction, \( F(1, 47) = 4.66, p < .05 \). Although in the predicted direction, planned comparisons investigating this interaction did not reach significance. However, the pattern of means suggest that when given the positive expectation, transmitters enjoyed the experience less than when they received no expectation, \( F(1, 47) = 2.17, p = .14 \). Conversely, the means suggest that when given the positive expectation, the receivers enjoyed the experience more than when they were given no expectation, \( F(1, 47) = 2.49, p = .12 \).
Table 1
Means for the Dependent Measures in Study 3

<table>
<thead>
<tr>
<th>Measures</th>
<th>Transmitters</th>
<th></th>
<th>Receivers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No expectation</td>
<td>Positive expectation</td>
<td>No expectation</td>
<td>Positive expectation</td>
</tr>
<tr>
<td>Overall Affect Index</td>
<td>.61</td>
<td>-.81</td>
<td>-.58</td>
<td>.95</td>
</tr>
<tr>
<td>Generated Thoughts</td>
<td>9.33</td>
<td>13.36</td>
<td>9.23</td>
<td>8.08</td>
</tr>
</tbody>
</table>

Note. Higher numbers on the overall affect measure indicates more positive affect.
**Generated Thoughts**

Finally, the total number of thoughts listed were counted to yield a total thought score for each participant (see Table 1). Total thought scores were then subjected to a 2 (transmitter vs. receiver) by 2 (no expectation vs. positive expectation) ANOVA. This analysis yielded no significant effects. Additionally, a simple contrast derived from the predictions of the AEM was also conducted. In this contrast, the transmitter/positive-expectation cell was assigned the weight of 1 whereas the receiver/positive-expectation cell and the no-tuning/positive-expectation cell were assigned the weight of -1. The two no-expectation cells were each assigned the weight of 0. Although the means were in the predicted direction (see Table 1), this analysis did not reach significance, $t(47) = 1.33$, $p = .18$.

**Discussion**

The results of Study 3 are consistent with the notion that communication roles interact with affective expectations to influence affective experience. Similar to the first two studies, Study 3 suggests that contrast effects in affective experience may not be limited to cases in which individuals are directly instructed to acquire different amounts of stimulus information (i.e., Geers & Lassiter, 1999). Instead, it seems that these differential effects may occur readily depending on both situational and dispositional factors.

The results of Study 3 also add to the existing literature on cognitive tuning. Specifically, these are the first data to show that cognitive-tuning instructions can alter affective experience. Further research will be needed to examine the situations in which cognitive-tuning sets impact affective experience.

In Study 3, thought scores were also examined. Although the pattern of means on this variable was in the predicted direction, it was not significant. However, the failure of
this variable to yield a significant effect may be due, at least to some extent, to the small sample examined in Study 3.

**Study 4**

The results of the Study 3 suggest that cognitive tuning may be an important factor in determining when affective reactions will be assimilated to or contrasted away from an affective expectation. Study 4 was conducted to replicate these results and to address various shortcomings of Study 3.

**The Addition of a No-Tuning-Instruction Condition**

First, Study 3 was incomplete in that it did not contain a control group in which participants received no cognitive-tuning instructions. The lack of this control in Study 3 leaves it unclear as to whether the affective reactions of the transmitters or of the receivers (or both) were altered by the cognitive-tuning manipulation. As discussed earlier, prior cognitive-tuning studies including such control groups (Gold & Cowles, 1973; Harvey et al., 1977; Lassiter et al., 1999; Mazis, 1973; Watts & Holt, 1970) have generally found that controls respond similar to receivers. These earlier results suggest that it is the interpretations of the transmitters and not the receivers that change as a result of the tuning manipulation. However, without this control condition, we cannot be certain that this was indeed the case with the affective reactions in the above study. For this reason, a no-tuning-instruction condition was included in Study 4.

**Did the Participants Notice the Discrepancy?**

Second, although the data were in the predicted pattern, it might be argued that in this study, the transmitters were not contrasting their affective reactions in the manner proposed by the AEM. Recall that Wilson et al. (1989) contend that contrast effects emerge in affective experience when expectation-discrepant information exists and is noticed by an individual. In Study 3, it might be suggested that the positive-expectation
transmitters simply interpreted the stimulus information differently than the other participants, but they did not notice than the stimulus information was discrepant from their prior expectation. It should be noted that this explanation seems unlikely given that the positive-expectation transmitters reported having a very positive expectation for the film while at the same time they reported very negative reactions towards the film. However, more definitive data on this issue were not available in the above study.

To provide some initial data on this issue, a small study was conducted to determine whether or not positive-expectation transmitters are more likely than receivers to recognize that the film-clip is inconsistent with their prior expectations. Participants (N = 25) in this small study were randomly assigned to one of four conditions, resulting in the same 2 (transmitter vs. receiver) by 2 (no expectation vs. positive expectation) design used in the Study 3. The experimental procedures in this study were identical to those used in the above study. After watching the same relatively unfunny-film clip, participants responded to the similarity item used in Study 2, which asked them, “How similar was the main video to what you expected it would be like?” Ratings on this item ranged from 1 (not at all) to 9 (very much). As would be anticipated by the AEM, the positive-expectation transmitters reported the film to be significantly different from their expectations as compared to participants in the other three cells, t (21) = 2.24, p < .05.

The above data suggest that the positive-expectation transmitters were more likely than the other participants to notice that the film clip was inconsistent with their prior expectation. To make sure that this was indeed the case in Study 3, participants were asked this similarity question at the end of the experimental session.
A Check of the Cognitive-Tuning Manipulation

Study 3 did not include a check of the cognitive-tuning manipulation. Although this manipulation appeared quite successful and has been effective in previous studies (i.e., Lassiter et al., 1999), a more confident interpretation of these results could be made with the addition of a manipulation check. For this reason, a manipulation check question was included in Study 4.

The Addition of a Second Stimulus Film Clip

The film clip used in Study 3 was the same clip used in Study 1 and by Geers & Lassiter (1999). In an effort to enhance the generalizability of the present series of experiments, a second relatively unfunny film clip was incorporated into the design of Study 4. This film clip was roughly 5 mins in duration and was taken from another black and white silent comedy entitled *City Lights*.

By What Mechanism did Affective Expectations Alter Affective Experience?

The results of Study 3 offer little information concerning the mechanism by which affective expectations altered affective reactions. For this reason, in Study 4, an effort was made to test between three possible mechanisms that may be causing these effects.

Mechanism 1: A Change-In-Interpretation Account

Earlier it was hypothesized that the assimilation and contrast effects would be found because transmitters increase their interpretive activity when presented with expectation-discrepant information. This explanation is consistent with the general tenants of cognitive-tuning theory (Cohen, 1961; Zajonc, 1960) and also with prior cognitive-tuning studies discussed earlier (i.e., Harkins et al., 1976; Harvey et al., 1977).

Of the mechanisms proposed by Wilson and Klaaren (1992), the above perspective seems to be most consistent with the change-in-interpretation mechanism. Recall that this change-in-interpretation account argues that the effects of affective expectations on
affective experience are not due to changes in the pool of data that people obtain from a stimulus. Instead, this account suggests that the influence of affective expectations on affective experience is due to the manner in which an individual mentally interprets the stimulus information. This account would suggest that in Study 3 the positive-expectation transmitters put more effort into interpreting the stimulus information and thus noticed the current discrepancies between the expectation and the stimulus.

This explanation rests upon the notion that the positive-expectation transmitters engaged in more cognitive activity than the other participants. If this was the case, one might expect that the positive-expectation transmitters would have reported experiencing more thoughts in Study 3 than the other participants. However, as reported, no significant effects were found on this thought variable. Nevertheless, the pattern was quite consistent with the predictions of the AEM. Additionally, because such a small sample was used, it may be that Study 3 did not provide an adequate test of this hypothesis. Of course it should be noted that a number of prior affective-expectation studies have not found significant effects using the thought measure (i.e., Geers & Lassiter, 1999; Study 1 and Study 2 of the present report). However, it may be that in those studies, affective expectations were influencing affective experience primarily by a selective-attention mechanism and not by a more “cognitive” mechanism. If this is the case, it may be that those earlier studies did not invoke a great deal of change in the mental activity of the participants and thus did not produce significant results on this thought measure. However, if significant effects are found on the thought measure in Study 4, the results may suggest that in this situation, the participants are altering their level of cognitive activity due to the independent variables.
Mechanism 2: An Increased-Attention Account (Selective-Attention Mechanism)

The above change-in-interpretation account is by no means the only possible explanation for the results of Study 3. For example, perhaps to aid them in forming a clear evaluation to pass along, the positive-expectation transmitters paid greater attention to the stimulus material than did the receivers. Consequently, the transmitters were more likely to notice the expectation-discrepant information available in the film clip (cf. Geers & Lassiter, 1999). If this is the case, the transmitters may have contrasted their affective reactions due to a selective-attention mechanism rather than to a change-in-interpretation mechanism.

Although compelling, there are several reasons why the above explanation is unlikely. First, a number of studies have found that transmitters often desire less overall information from a communication than receivers (Cohen, 1961; Lassiter et al., 1999; Mazis, 1973). These results have been interpreted as indicating that transmitters desire fewer details from a message so they can form a clear and unified summary of a message (Lassiter et al., 1999). Additionally, if transmitters are paying greater attention to a communication than receivers, it could be anticipated that they would have better memory for the stimulus information than receivers. In considering this interpretation of the results, the recall data collected in Study 3 were counted and analyzed. As in the first two studies, there were no significant effects on the recall scores. Although the above results make this type of a selective-attention explanation seem less compelling, more data are needed before a strong conclusion can be reached.

Mechanism 3: A Discrimination Account (Selective-Attention Mechanism)

Another explanation of the Study 3 data is that transmitters did not collect different amounts of stimulus information, but instead, they attended to different aspects of the stimulus information than did the receivers. For example, in an effort to develop an
accurate interpretation of the stimulus material, perhaps the transmitters paid greater attention to the expectation-discrepant aspects of the stimulus material than did the receivers. This explanation of the data would be most consistent with the selective-attention mechanism proposed by Wilson and Klaaren (1992). This explanation parallels that proposed in Study 2 in which optimists and pessimists were argued to have focused on different aspects of the stimulus information. This explanation seems unlikely in this situation, however, given that prior research has already found that transmitters do not differ from receivers and no-instruction participants in the type of information they extract from a stimulus (Lassiter et al., 1999).

Given these different potential explanations for the results of Study 3, one goal of Study 4 was to provide data concerning the mechanism by which affective-expectations alter affective experience in this situation. To do this, the total number of actions recalled and the thoughts generated by the participants were examined. Additionally, as in Study 2, participants were asked to unitize the stimulus video. As in Study 2, unitization was used as a dependent measure to help determine if affective experience was changing due to different amounts or to different types of information extracted from the stimulus material.

Predictions for Study 4

As in Study 3, participants received either a positive expectation or no expectation for a somewhat unfunny film clip. Cross-cutting the expectation manipulation, participants were given either transmitter, receiver, or no-tuning instructions before watching the film clip. Additionally, to enhance the generalizability of this research, participants were randomly assigned to view either one of two different relatively unfunny film clips. Except for the inclusion of the unitization measure, the cognitive-tuning-manipulation check, and the similarity question, the dependent measures were the same as those used by Geers and Lassiter (1999).
Based on the cognitive-tuning literature and the hypotheses of the AEM, the following predictions were made. First, it was predicted that the transmitters would contrast their affective reactions away from the positive expectation. Second, as in Study 3, it was predicted that the receivers would assimilate their affective reactions towards the positive expectation. Third, it was anticipated that the control participants would also assimilate their affective reactions towards the positive expectation.

In addition to analyzing the affective-reaction data, the unitization-rate data, the unitization-pattern data, the recall data, and the thought data were also analyzed. First, if unitization-pattern differences were detected between the transmitters and receivers, it would suggest that the assimilation and contrast effects are due to a selective-attention mechanism akin to that predicted in Study 2 (i.e., the discrimination account). Alternatively, if unitization-rate differences were found, with positive-expectation transmitters unitizing more than the other participants, this finding would suggest that the assimilation and contrast effects were due to an increased-attention account. A similar pattern on the recall measure would also support the increased-attention account. Finally, if the positive-expectation transmitters report experiencing more thought during the experiment than the other participants, the results would be most consistent with Wilson and Klaaren’s (1992) change-in-interpretation account.

**Method**

**Participants**

Participants were 125 Ohio University undergraduates. Each student participated individually in return for partial course credit. Before arrival, participants were randomly assigned to one of twelve conditions, resulting in a 3 (tuning instructions: transmitter vs. receiver vs. control) by 2 (no expectation vs. positive expectation) by 2 (Don’t Shove by City Lights) factorial design.
Procedure

There were five main differences in the procedure of Study 4 and that used for Study 3. First, Study 4 included the control condition in which participants were given no cognitive-tuning instructions. Second, before receiving the cognitive-tuning manipulation, the participants were instructed to unitize the videotape. The unitization instructions and procedure were identical to that of Study 2. Third, participants viewed either the Don’t Shove video used in Study 3 or a second film clip, City Lights. Fourth, after completing the main dependent measures (yielding the global affect index [alpha = .90], the specific affect index, the unprompted affect index, a thought index, and a recall index), participants were given one additional question designed to check the effectiveness of the cognitive-tuning manipulation. This item was “Think back to the instructions you received before you saw the main videotape. Which of the following were you told by the experimenter?” Participants were provided with the following three responses to choose from, (A) “I was told that I would tell another student about the video”, (B) “I was told that another student would tell me about more about the video”, (C) “I was told neither A nor B”. Finally, at the end of the experimental session, participants were asked to indicate how similar the main video was to what they expected on a 9-point scale.

Results

Manipulation Checks

First, the effectiveness of the tuning manipulation was investigated. An examination of the responses from the tuning manipulation-check question revealed that only one participant incorrectly recalled their tuning instructions. It was determined a priori to exclude this individual from subsequent analyses. Thus, the following analyses contained 124 of the 125 participants.
Next, to check if the expectation manipulation was successful, data from this manipulation-check question was subjected to a 3 (tuning instructions: transmitter vs. receiver vs. control) by 2 (no expectation vs. positive expectation) by 2 (Don’t Shove vs. City Lights) ANOVA. This analysis reveal only a significant main effect of the expectation manipulation, \( F(1, 112) = 11.09, p < .001 \). The positive-expectation participants (\( M = 6.02 \)) expected to enjoy the film more than the no-expectation participants (\( M = 4.54 \)).

Affective Reactions

To examine the effect of the independent variables on affective reactions, the scores on the three affect variables were standardized and entered into a 3 (tuning instructions: transmitter vs. receiver vs. control) by 2 (no expectation vs. negative expectation) by 2 (Don’t Shove vs. City Lights) by 3 (affect measure: global affect index vs. specific affect index vs. unprompted affect index) between - within ANOVA. Unexpectedly, this ANOVA yielded no significant effects (See Table 2 for standardized cell means).

A series of planned comparisons were then performed on the combined affect scores. The first contrast tested if the affective reactions of the positive-expectation transmitters were significantly less positive than the reactions of the no-expectation transmitters. Contrary to the hypotheses, this test was nonsignificant, \( t(112) = .77, p = .44 \). A planned comparison testing the prediction that the affective reactions of the positive-expectation receivers would be more positive than those of the no-expectation receivers was also nonsignificant, \( t(112) = .41, p = .69 \). Finally a third planned comparison, testing whether the affective reactions of the positive-expectation controls were more positive than those of the no-expectation controls, was also nonsignificant, \( t(112) = 1.39, p = .16 \).
Table 2
Means for the Dependent Measures in Study 4

<table>
<thead>
<tr>
<th>Measures</th>
<th>Transmitters</th>
<th></th>
<th>Receivers</th>
<th></th>
<th>Controls</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No expectation</td>
<td>Positive expectation</td>
<td>No expectation</td>
<td>Positive expectation</td>
<td>No expectation</td>
<td>Positive expectation</td>
</tr>
<tr>
<td>Overall Affect Index</td>
<td>-.28</td>
<td>.30</td>
<td>.06</td>
<td>-.31</td>
<td>-.37</td>
<td>.64</td>
</tr>
<tr>
<td>Unitization Rates</td>
<td>38.05</td>
<td>42.76</td>
<td>57.35</td>
<td>38.75</td>
<td>56.86</td>
<td>43.70</td>
</tr>
<tr>
<td>Generated Thoughts</td>
<td>6.48</td>
<td>7.43</td>
<td>8.00</td>
<td>6.30</td>
<td>7.77</td>
<td>6.00</td>
</tr>
<tr>
<td>Recalled Actions</td>
<td>15.19</td>
<td>18.86</td>
<td>18.20</td>
<td>16.35</td>
<td>19.86</td>
<td>17.95</td>
</tr>
<tr>
<td>Similarity Ratings</td>
<td>2.52</td>
<td>2.62</td>
<td>2.95</td>
<td>2.65</td>
<td>2.68</td>
<td>3.20</td>
</tr>
</tbody>
</table>

Note. Higher numbers on the overall affect measure indicate more positive affect. Higher numbers on the similarity measure indicate judgments of greater similarity to the expectation.
Unitization Analyses

The increased-attention account predicts that the positive-expectation transmitters would unitize the film clips into more meaningful actions than either the receiver or control participants. To test this possibility, a 3 (tuning instructions: transmitter vs. receiver vs. control) by 2 (no expectation vs. negative expectation) by 2 (Don’t Shove vs. City Lights) ANOVA was performed on the unitization-rate data (i.e., the number of button presses). Similar to the affect analysis, no significant effects emerged (see Table 2 for cell means).

Contrasts were then performed to compare each of the three positive-expectation cells with their no-expectation counterparts. The differences between the positive-expectation transmitters and the no-expectation transmitters and the difference between the positive-expectation controls and the no-expectation controls were nonsignificant (ts (112) = .45 and 1.26, ps > .2, respectively). The difference between the positive-expectation receivers and the no-expectation receivers approached but did not reach conventional levels of significance, t (112), = 1.66, p = .11.

The discrimination account described earlier predicts unitization-pattern differences between the transmitters and the receivers and controls. Following the procedures used in Study 2, the unitization-pattern data were submitted to a 3 (tuning instructions: transmitter vs. receiver vs. control) by 2 (no expectation vs. negative expectation) by 2 (Don’t Shove vs. City Lights) by 60 (interval) mixed-effects ANOVA. This analysis yielded a significant main effect of Interval and a significant Interval by Film Clip interaction (Fs [59, 6608] = 8.16 and 5.14, ps < .001, respectively). Together these results indicate that participants agreed on which intervals in the film clips contained more meaning, and that which particular intervals were considered meaningful differ depending on the film clip that was observed. There were no significant effects associated with the Expectation or Tuning Instructions factor.12
As in Study 2, separate pattern analyses were conducted on the positive-expectation participants and the no-expectation participants. These analyses were performed to provide a clearer test of the possibility suggested by the discrimination account that transmitters would primarily differ from receivers and controls in the type of information they focused on in the positive-expectation condition. These separate analyses only produced the same main effect of Interval and the same Interval by Film Clip interaction found in the overall analysis described above (all other Fs < 1.). Again, there were no significant effects associated with the Tuning Instruction factor.

Generated Thoughts

The change-in-interpretation account suggests that the positive-expectation transmitters would generate more thoughts than the no-expectation participants who, in turn, would generate more thoughts than the positive-expectation receivers and controls. To test this hypothesis, the total number of thoughts listed by each participant was counted to yield a total thought score for each participant. Total thought scores were then subjected to a 3 (tuning instructions: transmitter vs. receiver vs. control) by 2 (no expectation vs. positive expectation) by 2 (Don’t Shove vs. City Lights) ANOVA. This analysis produced no significant effects (see cell means in Table 2).

A simple contrast derived from the predictions of the AEM was then conducted. In this planned comparison, the transmitter/positive-expectation cell was assigned the weight of +2 whereas the receiver/positive-expectation cell and the no-tuning/positive expectation cell were each assigned the weight of -1. The three no-expectation cells were each assigned the weight of 0. Although the means were generally in the predicted pattern, this contrast did not reach significance, Ũ(112) = 1.32, p = .18.
Recalled Actions

As in the previous studies, the total number of actions recalled were summed for each participant to yield a total recall score. The recall scores were then submitted to the same 3 (tuning instructions: transmitter vs. receiver vs. control) by 2 (no expectation vs. positive expectation) by 2 (Don’t Shove vs. City Lights) ANOVA employed above. The results of this analysis only produced a significant main effect of the Film Clip factor, $F(1, 112) = 10.81, p < .01$, such that participants recalled more from the Don’t Shove clip ($M = 20.01$) than the City Lights clip ($M = 15.29$). There were no significant effects associated with the Expectation or the Tuning Instruction factor.

Ratings of Similarity

Finally, responses to the similarity question were subjected to a 3 (tuning instructions: transmitter vs. receiver vs. control) by 2 (no expectation vs. positive expectation) by 2 (Don’t Shove by City Lights) ANOVA. This analysis produced no significant effects (see cell means in Table 2). Contrasts were then performed to compare each of the three positive-expectation cells with their no-expectation counterparts. None of these contrast yielded significant effects ($t < 1$).

Discussion

Although Study 3 provided preliminary evidence that communication roles interact with affective expectations in the formation of affective experience, Study 4 was unable to replicate this finding. It was anticipated that transmitters would notice that the somewhat unfunny films were inconsistent with their positive expectation and thus contrast their affective reactions. It was also anticipated that the receivers and the no-instruction control participants would not recognize this discrepancy and thus assimilate their affective reactions. However, the data did not reveal this predicted pattern. Instead, analyses of the affect data produced no significant effects. Several subsidiary measures were also included
to help clarify the mechanism responsible for the influence of affective expectations on affect experience. The analyses of these variables (i.e., unitization rate, unitization pattern, recalled actions, and generated thoughts) also yielded no significant effects associated with the cognitive tuning or the expectation manipulation.

Why did Study 4 fail to replicate the results of Study 3? One possible solution could be that either of the two manipulations were not entirely successful. However, an examination of the manipulation checks suggest that both the cognitive-tuning manipulation and the expectation manipulation were very effective at achieving the desired results. A second possible answer could be that the addition of the unitization task in some way interfered with the conditions that existed in Study 3 which enabled the predicted pattern of results to emerge. For example, it could be suggested that the unitization task disrupted participants ability to focus on or to entirely commit to their communication roles.

Although the above possibility cannot be ruled out, the results from several prior studies makes it seem somewhat unlikely. Specifically, in four previous studies, Lassiter et al. (1999) had participants unitize behavior sequences while they held different communication roles. In these studies, the tuning manipulation produced the predicted effects. Moreover, after each study, participants were asked to indicate how effortful or unpleasant they found the unitization task. Participants were also asked to indicate how anxious they felt while performing the unitization task. Participants reported that the unitization task did not require a great deal of effort, was not unpleasant, and that they were not overly anxious while performing the task. In addition, no differences were found among the various cognitive-tuning conditions on any of these items across all four studies. Therefore, given the results of these previous studies, it seems unlikely that adding the unitization task to the study effectively disrupted participants’ ability to attend to the
cognitive-tuning instructions. However, at this time, this possibility cannot be entirely ruled out.

Another plausible explanation for the results of Study 4 comes from an examination of the affect scores. Specifically, it seems that overall, participants in Study 4 liked the stimulus film clips somewhat more than participants in earlier studies. For example, in Study 4 the no-expectation participants appeared to like the stimulus material (on the global affect index; $M = 5.38$) relatively more than participants in Study 3 ($M = 4.65$). The possibility that the control participants found the film clips to be marginally enjoyable suggests that the desired discrepancy between the positive expectation and the stimulus film clips was not obtained in Study 4. This relatively high level of positive affect in Study 4 was not due to the addition of the second stimulus film clip, as the Don’t Shove clip and the City Lights clip received similar ratings (on the global affect index, Don’t Shove clip, $M = 5.41$; City Lights clip, $M = 5.34$). It is unclear at this time why participants in Study 4 would have enjoyed the film clips more than participants in past experiments.

As reviewed earlier, taken as a whole, the cognitive-tuning literature suggests that transmitters should be more apt than receivers or no-tuning controls to contrast their affective reactions away from an affective expectation. Indeed, data congruent with this possibility was gathered in Study 3. However, it should be noted that Guerin (1997; Guerin & Innes, 1989) has recently argued that the cognitive-tuning manipulation itself may be problematic. Specifically, Guerin contends that the role of the receiver is not clearly differentiated from that of the transmitter. In the typical cognitive-tuning study (as in the present studies), transmitters are told that they will pass along stimulus information to another person later in the experiment. In contrast, receivers are instructed to examine the same stimulus material, but with the belief that they will obtain further information concerning the material later in the experiment. According to Guerin, this procedure leaves
the receivers without a clear reason for why they are viewing the stimulus material. Because of this, Guerin suggests that receivers may infer that they will be asked to transmit something about the stimulus information to someone in the future. That is, receivers may query, “why else would they have me look at this material if they did not want me to do something with it later on?” If Guerin is correct and receivers sometimes view themselves as potential transmitters, it seems equally plausible that no-instructions controls might also make the same inference. If this is the case, the role of the transmitter is no longer easily differentiated from that of the receivers or controls. This ambiguity in the cognitive-tuning instructions may make it an unreliable manipulation. This unreliability may help explain the inconsistent results found in the present cognitive-tuning experiments. Nevertheless, at this time, it is still unclear why Study 4 failed to produce the anticipated effects.

General Discussion

Many theories of affect contend that preexisting knowledge structures such as goals, plans, standards, and personality factors shape our affective reactions (e.g., Clore, Schwarz, & Conway, 1994; David et al., 1997; Fiske, 1982; Ortony et al., 1988; Roseman, 1984; Rusting, 1998; Wyer et al., 1999). The current research investigated the role of one such prior knowledge structure--affective expectations--in the formation of affective experience. As noted in the Introduction, research supporting the role of affective expectations in the development of affective reactions has begun to accumulate, with a large portion of this work being driven by the AEM (Wilson et al., 1989). The AEM states that affective experience is determined as much by affective expectations as by information gathered in the situation at hand (Wilson & Klaaren, 1994). A central prediction of the AEM is that an experience will be assimilated to an affective expectation unless a discrepancy between an affective expectation and an actual experience exists and is noticed. When a discrepancy is noticed, an affective experience is expected to be contrasted away from a prior expectation.
As reviewed earlier, previous studies have marshaled strong support for the hypothesis that affective reactions are often assimilated towards a prior expectation (e.g., Berkowitz & Thome, 1987; Fradkin & Firestone, 1986; Hodges et al., 1998; Kirsch et al., 1983; Klaaren et al., 1994; Leventhal et al., 1979; Southworth & Kirsh, 1988; Tate et al., 1994; Wilson et al., 1989). However, only one prior study has successfully demonstrated that affective expectations can induce both assimilation and contrast effects in affective experience (Geers & Lassiter, 1999). Unfortunately, that study may be criticized on the grounds that the contrast effect was achieved by an artificial manipulation. Moreover, participants contrasting their affective reactions in the Geers and Lassiter (1999) study were directly instructed to attend to a large quantity of expectation-discrepant information. Thus, it may be argued that only by specifically instructing individuals to gather a great deal of expectation-discrepant information can researchers obtain contrast effects in affective experience. For these reasons, it may be suggested that in everyday life assimilation effects are the norm whereas contrast effects are virtually non-existent.

As of yet, relatively few studies have systematically tested for contrast effects in affective experience. Therefore, the primary objective of the present series of experiments was to test the hypothesis that affective expectations can readily produce both assimilation effects and contrast effects in affective experience. In the present experiments it was hypothesized that whether or not affective expectations evoke assimilation or contrast effects depends upon various situational and dispositional factors. It was reasoned that certain individual differences and situational factors increase the probability that people will notice a stimulus is inconsistent with an affective expectation. Following the logic of Geers and Lassiter (1999), it was predicted that these factors would increase the likelihood that people would contrast their affective reactions. The moderating variables examined--
optimism - pessimism and communication roles--were chosen, in part, because they are not artificial, but appear to be quite pervasive in everyday life.

The results of three of the four studies in the present report provide evidence consistent with the hypothesis that situational and dispositional factors moderate the impact of affective expectations on affective experience. That is, in three of the four studies, affective expectations were found to lead to both assimilation and contrast effects, depending upon the level of the situational or dispositional factor investigated. Thus, these data support both the assimilation and contrast hypotheses of the AEM and are consistent with the data collected by Geers and Lassiter (1999). Moreover, these experiments extend the work of Geers and Lassiter by indicating that contrast effects in affective experience are not limited to conditions in which individuals are directly instructed to closely attend to an expectation-discrepant stimulus. Instead, these data suggest that contrast effects can readily occur in affective experience--when certain situational and dispositional factors are in place.

Limitations to the Present Series of Experiments

Before proceeding, several limitations to the present research should be acknowledged. First, as discussed in the Introduction, studies examining the influence of affective expectations on affective experience seem, by nature, more vulnerable to demand-characteristic explanations than many other areas of research. That is, can we be certain that the affective-expectation manipulations in the present studies were influencing the true experiences of participants? Could it be that the expectation manipulations used in the present studies only changed how participants chose to report their experiences? Although such explanations cannot be ruled out entirely, several aspects of the current studies make a demand account seem unlikely. First, as in the Geers and Lassiter (1999) study, results obtained on a more subtle affect measure paralleled those found on more obvious affect
measures. This would not be anticipated if demand factors were largely responsible for the present results. Second, and perhaps more critical, it seems difficult for demand characteristics to explain the total pattern of data found in the current studies. For example, demand effects cannot easily explain the complex interaction between optimism - pessimism and affective expectations found in Study 1 and Study 2. Additionally, it is unclear how demand pressure could account for the unitization-pattern differences in Study 2 as well as the interaction between communication roles and affective expectations in Study 3. It seems that, although demand characteristics could potentially account for various aspects of the present data sets, they cannot clearly explain the entire pattern of data obtained herein.

A larger problem with the present series of experiments is their lack of generalizability. For example, only one type of affective state (humor/enjoyment) was investigated. Currently, it is unknown whether contrast effects will occur in other affective states such as fear or distress. Similarly, the present experiments relied on only one type of expectation manipulation which was delivered by a fellow student. It is unclear whether different expectation manipulations would have yielded similar results. Also, all four studies contained college undergraduates as participants. Again, we cannot be totally sure that the present effects would be replicated if a different sample was used (for further limitations, see below).

Finally, another downside to the present series of studies is that the fourth study failed to produce the predicted effects. As a result, we cannot be certain if cognitive-tuning instructions moderate the impact of affective expectations on affective experience. At this time it is unclear why this study failed to replicate the results of Study 3. Further research is needed to examine this issue.
Individual-Difference and Situational Moderators

As noted above, the primary purpose of the present series of experiments was to examine the possibility that situational factors and individual differences moderate the influence of affective expectations on affective experience. Presently, there are a number of affective-expectation studies which have included situational and dispositional factors in an attempt to explore their moderating role. In the following two sections, I review separately the evidence that situational factors and dispositional factors moderate the effects of affective expectations on affective experience.

Do Individual Differences Moderate the Influence of Affective Expectations?

The goal of Study 1 and Study 2 was to test whether the individual-difference variable optimism - pessimism moderates the effect of affective expectations on affective experience. The primary hypothesis was that optimists would be less likely than pessimists to detect and accept information that contradicted a specific affective expectation. As a result, it was predicted that optimists would assimilate expectation-inconsistent experiences towards a prior expectation, whereas pessimists would contrast expectation-inconsistent experiences away from a prior expectation. Additionally, it was anticipated that both optimists and pessimists would assimilate their affective reactions towards an expectation-congruent experience. The data showed that pessimism is associated with greater sensitivity to discrepant information as well as with contrasted affective reactions. Greater optimism, however, was found to be associated with less sensitivity to contradictory information and with the assimilation of affective reactions. Importantly, optimism - pessimism scores did not influence affective reactions when participants were provided an expectation that was congruent with their affective experience. Taken together, these findings provided strong support for the hypothesis that individual differences, in part, determine the impact of affective expectations on affective experience.
Study 1 and 2 provided evidence that optimism - pessimism moderates the influence of affective expectations on affective experience. However, optimism - pessimism is by no means the only individual-difference variable that should yield such assimilation and contrast effects. Other individual-difference variables which increase the likelihood that one will recognize that an affective experience deviates from an affective expectation should produce a similar pattern of results.

Consistent with the above notion, several recent studies have revealed that individual differences in need for cognition also moderate the influence of affective expectations on affective experience (Geers & Lassiter, 2000a; LaForce, Geers, & Lassiter, 2000). Recall that need for cognition refers to an individual’s tendency to engage in and enjoy effortful cognitive activity (Cacioppo & Petty, 1982; for a review, see Cacioppo et al., 1996). According to Cacioppo et al. (1996, p. 198), individuals high in need for cognition “naturally tend to seek out, acquire, think about, and reflect back on information to make sense of stimuli.” Low-need-for-cognition individuals, in contrast, are described as “more likely to rely on others, cognitive heuristics, or social comparison processes to provide this structure” (Cacioppo et al., 1996, p. 198). Based on prior need for cognition research (e.g., Lassiter et al., 1991; Martin et al., 1990), two studies were conducted to test the potential interactive effect of need for cognition and affective expectations. The methodologies for these need-for-cognition studies were similar to the present optimism - pessimism studies. In the first experiment (Geers & Lassiter, 2000a), individuals varying in their level of need for cognition received either a positive expectation or no expectation for a relatively unfunny film clip. The second study (LaForce et al., 2000) was similar to the first except that it also included a negative-expectation condition. Across both experiments, high-need-for-cognition individuals were found to contrast their affective reactions away from the positive expectation. Additionally, low-need-for-cognition
individuals assimilated their affective reactions towards the positive expectation. Finally, in the second study, both high and low need-for-cognition individuals were found to assimilate their affective reactions towards the negative expectation. The results of these need-for-cognition studies provide further support for the hypothesis that dispositional factors moderate the impact of affective expectations on affective experience. Importantly, these data show the pattern of results obtained in the present report are not unique to optimism - pessimism. Instead the effects appear to generalize to other individual-difference variables.¹³

Do Situational Variables Moderate the Influence of Affective Expectations?

Study 3 and 4 tested whether the situational variable of communication roles (cf. Zajonc, 1960) moderates the effect of affective expectations on affective experience. It was hypothesized that individuals set to transmit information would increase their cognitive activity to interpret an expectation-inconsistent stimulus, resulting in contrast effects. Individuals set to receive further information and individuals given no communication instructions, on the other hand, were not expected to increase their interpretive activity. Therefore, when presented with an expectation-discrepant stimulus, it was hypothesized that they would assimilate their affective reactions towards their prior expectation. The results of Study 3 supported these hypotheses, as transmitters were found to contrast their affective reactions and receivers were found to assimilate their affective reactions. However, the results of Study 4 failed to replicate this pattern of results. In this final experiment, neither the tuning manipulation or the expectation manipulation significantly influenced affective reactions.

The results of Study 3 and 4 provided inconclusive results concerning the moderating role of situational factors. However, several more recent experiments using a different situational variable have been successful in demonstrating such moderating effects
(Geers & Lassiter, 2000b; Geers, Lassiter, Ettenhofer, & Simons, 2000). In these experiments, we explored the possibility that assimilation and contrast effects in affective experience are, in part, due to one’s previous experience with a stimulus. This research began with the notion that prior experience with a stimulus increases an individual’s knowledge of the features contained in that stimulus (cf. Gibson, 1979). It was reasoned that prior exposure allows a perceiver to become more familiar with a stimulus and thereby improves their ability to recognize expectation-discrepant information appearing in that stimulus. Thus, in the two experiments (Geers & Lassiter, 2000b; Geers et al., 2000), it was predicted that prior experience would lead participants to detect expectation-discrepant information available in a stimulus, and as a result, would induce them to contrast their affective reactions away from an affective expectation. Both studies revealed this predicted contrast effect. Additionally, individuals with no prior experience with the stimulus were found to assimilate their affect reactions towards their affective expectation. Finally, prior-experience participants and no-prior experience participants were both found to assimilate their affective reactions towards an expectation-consistent stimulus. The results of these subsequent studies provide the strongest support yet for the hypothesis that situational factors can moderate the impact of affective expectations on affective experience. However, data indicating that situational factors interact with affective expectations is still sparse. Further research is required to demonstrate that other situational variables serve this moderating role.

An Assessment of the AEM

Many studies have now investigated the implications of holding different affective expectations. Below is an evaluation of this literature. The primary goal of this section is to summarize the results which bear on the central hypotheses of the AEM as well as to
examine issues pertaining to the overall tenability of this model. Following this assessment, directions for future research on affective expectations are discussed.

The Stimulus Value Confirms an Affective Expectation

The first major prediction of the AEM is that affective expectations facilitate the evaluation of a stimulus that is congruent with an expectation. According to Wilson et al. (1989), in this case people rely largely on their expectation and little on the actual experience in forming their affective reaction. In support of this hypothesis, several studies have found that a positive expectation leads individuals to enjoy a pleasant stimulus more than having no expectation (Present Study 2; Geers et al., 2000; Wilson & Klaaren, 1992). Similarly, others studies indicate that a negative expectation leads individuals to dislike an unpleasant stimulus more than having no expectation (Present Study 1; Berkowitz & Thome, 1987; Fradkin & Firestone, 1986; LaForce et al., 2000; Leventhal et al., 1979; Tate et al., 1994; Wilson et al., 1989, Study 2). It should also be noted that Wilson et al. (1989, Study 2) failed to produce this assimilation effect in certain cells of their design. Nevertheless, the majority of the studies testing this prediction have yielded consistent results.

The Stimulus Value Is Discrepant With an Affective Expectation, but the Discrepancy Is Not Noticed

The second major prediction of the AEM is that peoples’ affective reaction to an expectation-discrepant stimulus will be assimilated to a prior expectation when an inconsistency between the expectation and stimulus exists but is not noticed. In support of this prediction, many studies have shown that people assimilate relatively negative stimuli to a positive expectation (Present Study 1; Present Study 3; Geers & Lassiter, 1999; Geers & Lassiter, 2000a; Geers & Lassiter, 2000b, Hodges et al., 1999; Klaaren et al., 1994; LaForce et al., 2000; Wilson & Klaaren, 1992; Wilson et al., 1989; Study 1). Similar
assimilation effects have also been found with the use of negative expectations and relatively positive stimuli (Present Study 2; Geers et al., 2000; Wilson et al., Study 2). It should be noted, however, that two reported studies have failed to produce this assimilation effect (Present Study 4; Geers, Lassiter, & LaForce, 2000). Nonetheless, the data have generally supported this prediction.

The Stimulus Value Is Discrepant With an Affective Expectation, and the Discrepancy Is Noticed

The third major prediction of the AEM is that affective reactions towards an expectation-discrepant stimulus will be contrasted with an expectation when the inconsistency is recognized. Several studies demonstrate contrast effects can be induced by a positive expectation (Present Study 1; Present Study 3; Geers & Lassiter, 1999; Geers & Lassiter, 2000a; Geers & Lassiter, 2000b; LaForce et al., 2000). Two studies also indicate that contrast effects in affective experience can be obtained from a negative expectation (Present Study 2; Geers et al., 2000). At this time, it seems that whether or not assimilation or contrast occur in affective experience depends upon various situational and dispositional factors. Finally, it should also be noted that three studies have been reported in which this predicted contrast effect was not found (Present, Study 4; Wilson & Klaaren, 1992; Wilson et al., 1989, Study 2). However, as discussed in the Introduction, the inconclusive results found by Wilson and colleagues may have been due an ineffective manipulation that they employed.

Do Affective Expectations Impact Evaluation Times and Conscious Thought?

It is also predicted in the AEM that when people rely on an affective expectation, they evaluate the stimulus more quickly and engage in less conscious thought about the stimulus. An examination of the affective-expectation literature reveals relatively few tests for the predicted differences in evaluation times. However, of the four studies testing this
prediction (using both positive and negative expectations), all four have obtained supportive results (Wilson & Klaaren, 1992; Wilson et al., 1989). More inconsistent evidence, however, has been gathered concerning the amount of generated thought. In general, studies testing this hypothesis have found weak to nonsignificant effects on this variable (Present Studies 1 - 4; Geers & Lassiter, 1999; Geers & Lassiter, 2000a; Geers & Lassiter, 2000b; Geers et al., 2000; LaForce et al., 2000; Wilson & Klaaren, 1992). Indeed, only two studies have found affective expectations to significantly alter the number of thoughts participants report (Wilson et al., 1989). In sum, whereas several studies have supported the evaluation time prediction, inconsistent results have been obtained regarding the predicted differences in conscious thought.

Do Affective Expectations Influence Behavior and Decision-Making?

A number of studies have also found that affective expectations can influence dependent variables other than affect, evaluation times, and conscious thought. Specifically, these studies report that affective expectations alter behavior, future intentions, and decision-making. For example, Berkowitz and Thome (1987) found that affective expectations influence the amount of aggressive behavior an individual displays during an affective experience. Several other studies report that affective expectations influence behavioral intentions and decisions to repeat an experience (Present Study 2; Hodges et al., 1999; Klaaren et al., 1994). Although these effects were not explicitly hypothesized in the original formulation of the AEM, it seems that if affective expectations are truly altering affective reactions, they should also influence variables that are partially dependent on affect such as behavioral intentions (cf. Gilbert et al., 1999).

Evidence for the Generalizability of the Affective Expectation Research

Another important issue regarding the AEM is the generalizability of its predictions.
As noted above, tests of each of the main predictions of the AEM have included both positive and negative expectations. Thus, it seems that many of the model’s predictions hold across expectations with different valences.

An additional generalizability issue concerns the methods adopted to induced affective expectations in these studies. First, it should be noted that most of these studies have utilized rather explicit expectation manipulations. Second, in almost all of the studies thus far, affective expectations have been induced by telling participants that other people liked or disliked a stimulus or experience (a category-based expectancy; Jones & McGillis, 1976). In only two studies were expectations derived in a different manner (Wilson & Klaaren, 1992; Wilson et al., 1989, Study 2). In these two studies, participants received bogus feedback concerning an initial set of stimuli which allowed them to develop their own affective expectation (a target-based expectancy; Jones & McGillis, 1976). It is unclear at this time if the manner by which an affective expectation is generated alters the outcome of the expectation manipulation.

Another important generalizability issue concerns the type of affective states examined in the affective-expectation studies. Clearly, many of these studies have relied on humor and enjoyment as the primary dependent variables (e.g., Present Studies 1 - 4; Geers & Lassiter, 2000a; Geers & Lassiter, 2000b; Geers et al., 2000; Geers & Lassiter, 1999; Klaaren et al., 1994; LaForce, et al., 2000; Wilson & Klaaren, 1992; Wilson et al., 1989). However, it should be noted that several studies have examined other affective states, such as distress, fear, and positive and negative mood states (e.g., Berkowitz & Thome, 1987; Kirsch et al., 1983; Leventhal et al., 1979; Tate et al., 1994; Wilson et al., Pilot Study). It should be pointed out, however, that many of the AEM predictions, such as the one for contrast effects, have been demonstrated with only humor and enjoyment as the affective states in question.
In a similar vein, what are the stimulus materials like in these experiments? An examination of the affective-expectation literature reveals that a majority of these experiments have relied upon one-panel cartoons and short film clips as stimulus materials (e.g., Geers & Lassiter, 1999; Wilson et al., 1989). On the positive side, however, several more clinically oriented studies have examined the influence of affective expectations on real-world experiences such as moods felt during nicotine withdrawal (Tate et al., 1994) and fear exhibited while approaching snakes (Kirsch et al., 1983). Although these latter studies are somewhat limited in their ability to confirm or disconfirm specific predictions of the AEM, they do provide evidence that is generally consistent with the model’s hypotheses (cf. Wilson & Klaaren, 1992).

Evidence for the Authenticity of Expectation-Induced Affect

In most of the AEM studies it has been assumed that the expectation and no-expectation participants were experiencing similar positive and negative affective reactions. An interesting question, not yet discussed in the present report, concerns a potential difference between the affective reactions of individuals who assimilate their affective reactions and those who carry no prior expectation. Specifically, the issue is whether or not the affective reactions of the assimilation participants are, in some way, less authentic than the reactions of the no-expectation participants (cf. Wilson et al., 1989). In suggesting this possibility, Wilson et al. (1989, p. 524) stated that individuals given a positive expectation, for example, may

convince themselves that they like something, but at some level they may know that it is unlikable. Preferences that are expectation driven may differ from preferences that are data-driven; for example, they might be held with less confidence, be less apt to predict future
behavior, or expressed more in regulated nonverbal behaviors than unregulated ones.

The core notion to this argument is that when affective reactions are formed by assimilation, they may be, in some way, less accurate and reliable than affect formed without the aid of a prior expectation.

Several studies have presented data which seem to bear on this authenticity issue. For example, a number of studies show that affective expectations influence both behavioral intentions and future decision-making. If individuals who assimilate their affective reactions towards an affective expectation do experience less genuine affect, their overt affective reactions should not be a strong predictor of their desire to repeat an experience. Other data which could be relevant to this issue are provided by studies utilizing more covert measures of affect. These studies have found the same assimilation effect on self-report measures of affect and less obvious affect measures (e.g., Geers & Lassiter, 1999; Wilson et al., 1989). These latter results could be interpreted as indicating that affect formed by assimilation is not different from data-driven affect. However, Wilson et al. (1989) have argued that even these more covert measures of affect are likely insensitive at detecting more concealed feeling states. At this time, it is unclear whether the affect experienced by the assimilation participants is less genuine than that of the no-expectation participants.

**Directions for Future Affective Expectation Research**

The above assessment amply demonstrates the importance of affective expectations. Specifically, affective expectations have been shown to yield assimilation effects when an expectation is consistent with an affective reaction. Similarly, affective expectations have also been shown to lead to assimilation effects towards an expectation-inconsistent experience if the discrepancy goes unnoticed. Conversely, affective expectations have
been found to produce contrast effects when the discrepancy between an expectation and an experience is noticed. Additional data suggest that as well as influencing affective reactions, affective expectations also impact evaluation times, behavior, future intentions, subsequent decision-making, and perhaps even an individual's level of conscious thought. Finally, the data suggest that these effects are, in general, reliable and that they occur for both positive and negative expectations.

Along with indicating the importance of affective expectations, the above section helps to clarify potential directions for future affective-expectation research. Below I discuss a number of issues which should be addressed in future studies.

**Affective Expectations and Different Affective States**

First, most of the affective-expectation research has explored the effect of affective expectations on humor/enjoyment reactions and has ignored other affective states. Testing only a small sample of affective states could be a serious problem for this literature. It may be that certain effects which are found in humor/enjoyment reactions do not generalize to other affective states. For example, contrast effects from affective expectations have only been demonstrated in humor/enjoyment reactions. Do they also occur in fear and disgust reactions? Obviously, future work is needed to test whether or not such contrast effects exist with different affective states.

**A Wider Variety of Stimulus Materials Is Needed**

It would also seem profitable for researchers to examine affective reactions to stimuli other than one-panel cartoons and 5-min film clips. One potential avenue for future research would be to study the impact of affective expectations on real-life experiences such as distress felt during a dentists visit, an employee's job satisfaction, and happiness experienced in a retirement community. It would be interesting to know how much affective reactions in these diverse settings are driven by prior expectations. One recent
study to explore such real-world experiences has been conducted by Hodges et al. (1999). This study examined the role of affective expectations in students’ evaluations of safe-sex conversations. The data revealed that students with positive expectations found the safe-sex conversations to be more pleasant than those with a neutral expectation. The data further indicated that the positive-expectation students were more willing to take part in a similar conversation in the future than the neutral-expectation students. These data are intriguing and support the notion that affective expectations do indeed play an important role in real-life experiences.

**Issues Regarding the Expectation Manipulation**

There are a number of issues concerning the expectation manipulation which require further consideration. First, many of the expectation manipulations employed in these experiments have been quite explicit. At this time, we cannot be certain if similar assimilation and contrast effects would be found if less obvious expectation manipulations were utilized (cf. Ditto & Hilton, 1990). This issue is important because it may be that in real-life situations, affective expectations are usually generated in more subtle ways than they have been in these experiments. Thus, future studies should investigate the effects that both obvious and more subtle expectation manipulations have on affective reactions.

Additionally, in most of the affective-expectation studies the expectations have been delivered by the experimenter. It would seem profitable, however, if future studies employed different techniques to impart affective expectations. First, if the expectations were not provided by the experimenter they would seem less vulnerable to demand-characteristic explanations. Second, affective expectations provided by another person (category-based expectation) may differ in some way from those which are created, say, by the participants’ themselves (target-based expectation). For example, it may be that target-based expectations are, by nature, stronger or more tenacious than category-based
expectations. If this hypothesis is correct, it should be more difficult to obtain contrast effects from target-based expectations than from category-based expectations.

Interestingly, results consistent with this possibility already exist. That is, the only two studies to use target-based expectations (Wilson & Klaaren, 1992; Wilson et al., 1989, Study 2) are the same two studies in which Wilson and colleagues found assimilation when they anticipated contrast. It could be that these studies would have yielded the predicted contrast effects if the researchers used category-based expectations. For this and similar reasons, it seems that a systematic investigation of the various techniques for delivering affective expectations is in order.

Another factor not yet investigated in previous affective expectation studies is the level of importance that an expectation has for the participants. By importance, I am referring to the motivational significance associated with an expectation (Olson, et al., 1996). The affective-expectation studies conducted thus far have clearly involved minimal motivational forces. That is, compared to many expectations that people form in everyday life, the expectations tested in these experiments seem quite trivial. For example, some people spend months or even years looking forward to their wedding day or their college graduation. As of yet, however, no affective-expectation research has examined such motivationally involving expectations. Are we less likely to observe contrast effects when people encounter information that conflicts with an expectation they are highly motivated to keep? It may be that when people are highly committed to an affective expectation even a great deal of expectation-discrepant information will not overpower it. Consistency theories (e.g., Festinger, 1957) seem to suggest that this may be the case. Future research should be conducted which examines the role of affective expectations in the evaluation of highly regarded experiences.
In the previous summary section it was also acknowledged that positive and negative expectations have produced similar patterns of results (e.g., assimilation and contrast). Certain cases may exist, however, in which positive and negative expectations do not yield comparable effects. For example, imagine Person A and Person B are both going to a professional conference. Person A expects to enjoy the conference, whereas Person B dreads going to the conference. At the conference, Person A has a relatively unpleasant time whereas Person B has a relatively pleasant time. All else being equal, the AEM would predict that these individuals are equally likely to recognize that their experience is inconsistent with their prior expectation (i.e., a contrast effect). In real life, however, this may not always be the case. Instead, it could be that people are more motivated to relinquish their negative expectations than their positive ones so they can experience positive rather than negative thoughts and feelings. If this is the case, contrast effects due to negative expectations would be more likely than contrast effects due to positive expectations. Although no clear evidence for this kind of effect was obtained in the present series of experiments, the conditions needed for such an effect to occur may not have been met in this research. Future studies are needed to explore this possibility.

**Dependent Variables Other Than Affective Reactions**

As noted in the evaluation section, affective expectations have been found to impact variables other than affective reactions. For example, Wilson et al. (1989) found that affective expectations influence the amount of thoughts individuals generate while forming an affective reaction. However, subsequent studies have failed to replicate this predicted effect. Future research should examine why this effect has not been revealed in subsequent studies. It may be that the sheer quantity of thought that people report is not as reliable a dependent measure as originally suggested in the AEM. Another plausible explanation for these failures to replicate comes from a difference in the design of the latter studies.
Specifically, in the Wilson et al. (1989) studies, participants examined the stimuli, answered several affect questions, and then listed their thoughts. In most of the follow-up studies, however, participants have answered a larger number of affect questions, completed a recall task, rated their recalled items for valence, and then listed their thoughts. It may be that this greater intervening time and cognitive activity in the latter studies disrupted participants’ ability to correctly recall their thoughts. Therefore, affective expectations may alter conscious thought, but this effect has been masked in the more recent affective-expectation studies due to a difference in their design. Further research is required to clarify this issue.

The assessment of the AEM also indicated that variables such as behavior and future decision-making can be influenced by affective expectations. This is an important feature of the affective-expectation literature because it suggests that these expectations influence variables other than momentary affect. Unfortunately, to date, only one study has investigated how affective expectations alter social interaction during an affective experience (Berkowitz & Thome, 1987). Future research should provide further tests of this finding. Also, although a number of studies have found that behavioral intentions and subsequent decisions are changed by affective expectations, none have tested whether these expectations produce changes in future behavior. Again, this seems like an important avenue for further research.

The Authenticity of Expectation-Driven Affect

An unresolved issue in the affective-expectation literature concerns the authenticity of the affective reactions generated by the expectation participants. Wilson et al. (1989) have noted that the affective reactions of the assimilation participants may be less genuine, or pure, than those whose affect is not driven by an expectation. These researchers suggested that while a positive expectation may induce an individual to react more
positively towards a stimulus, at some level, the individual may disagree with this reaction. These researchers contend that many unobtrusive measures of affect are not sensitive enough to detect such differences. Wilson et al. did suggest, however, that to test this hypothesis researchers could “conduct a microanalysis of people’s behavioral reactions, to determine whether the different type of affective reactions are distinguishable by, for example, coding people’s facial reactions with Ekman and Friesen’s (1978) facial action coding system, or by measuring facial electromyographic activity” (Wilson et al., 1989, p. 524). These researchers concluded that more sensitive measurement techniques such as these should be able to differentiate expectation-driven affect from data-driven affect. Although research testing this hypothesis has not yet been reported, a study examining both the self-reported affect and the facial electromyographic activity of participants receiving no expectation, a consistent expectation, and an inconsistent expectation is currently underway. This research should provide a much needed test of this authenticity hypothesis.

The AEM and Other Assimilation and Contrast Models

One issue not mentioned in the earlier assessment of the AEM, but discussed in the Introduction, concerns the relationship of the AEM to other assimilation-contrast models. In the Introduction, it was noted that the predictions of the AEM are, in general, similar to those made by other models of assimilation and contrast (e.g., Martin, 1986). That is, as in other models, expectation-discrepant stimuli are said to produce assimilation or contrast effects depending upon whether or not a perceiver notices an existing discrepancy. If the discrepancy goes unnoticed, assimilation effects should occur. If the inconsistency becomes apparent, reactions are anticipated to be contrasted.

Although the predictions of the AEM are similar to those made in other models, the early affective-expectation research was only successful at demonstrating the anticipated assimilation effect. Due to the lack of evidence for the contrast prediction, it was unclear
whether affective expectations would yield the differential effects found in social-cognitive judgments. As noted above, however, eight studies now indicate that contrast effects do indeed exist in affective experience (Present Studies 1-3; Geers & Lassiter, 1999; Geers & Lassiter, 2000a; Geers & Lassiter, 2000b; Geers et al., 2000; LaForce et al., 2000). These data suggest that affective expectations are similar to other expectancies in that they both can produce assimilation and contrast effects.

Given that affective expectations have now been found to cause these differential effects, is there any reason to study the effects of expectations on affect separately from the effect of expectations on cognitive judgments? At this time, it seems premature to suggest that assimilation and contrast in affective experience and cognitive judgments are equivalent. It may be that the processes by which expectations induced assimilation and contrast in affective experience differs substantially from the processes by which expectations produce assimilation and contrast in cognitive judgments. For instance, it has been suggested by Wilson and Brekke (1994) that assimilation is more likely in affective reactions than in cognitive judgments. These authors reasoned that people are less likely to adjust their affective reactions for contaminating factors, such as affective expectations, because affective reactions are formed largely outside of awareness. Therefore, it may be the case that, although we have found evidence for expectation-induced contrast effects in affective experience, assimilation dominates more in affective experience than in cognitive judgments. Further research is needed to determine the extent to which assimilation and contrast in affect experience mirrors that in social judgment.

What Mechanisms Underlie the Influence of Affective Expectations?

Finally, as discussed in the Introduction, Wilson and Klaaren (1992) suggested several different mechanisms which may be responsible for the influence of affective expectations on affective reactions. Unfortunately, little evidence is available to confirm or
disconfirm these different mechanisms. However, several studies do support the selective-attention account proposed by Wilson and Klaaren (Present Study 2; Geers & Lassiter, 1999; Wilson et al., Study 1). This account suggests that affective expectation exert their influence by altering the set of information that individuals obtain from a stimulus. Unfortunately, at this time, little data exists which test the possibility that there are other mechanisms responsible for these effects. Further research is needed to examine the possibility that affective expectations result from mechanisms other than that of selective attention.

Conclusions

Numerous experiments have investigated the relationship between prior expectations and affective experience. These experiments have largely supported the framework provided by the AEM. Indeed, the present series of experiments adds to the increasing mass of evidence congruent with this model by demonstrating that situational and dispositional factors moderate the effects that these expectations can have on affective experience. However, many important issues await further research. Some of these issues—such as tests of the underlying mechanisms—have received only minimal study, whereas others—such as tests of the authenticity of expectation-driven affect—have not yet been systematically examined. Affective-expectation research which addresses these and other significant issues should advance our knowledge of the formation of affect. Although this subsequent research may uncover evidence which contradicts the tenants of the AEM, at this time, it seems that this model provides researchers with a useful framework for studying the role of expectations in affective experience.
Footnotes

1 Alternatively, it should be noted that cognitive-consistency formulations could also lead to the prediction of contrast effects and not assimilation effects as was found in these previous studies. Specifically, it may be suggested that people would contrast their affective reactions away from the expectations provided by the experimenter so as not to appear as though they were easily swayed by the experimenter.

2 Agreement between two coders (both blind to condition) on a subset of the thought data was high, $r = .85$.

3 Gender did not qualify any of the results in the present studies and will not be mentioned further.

4 The data were also analyzed by performing a median split ($Mdn = 16$) on the optimism - pessimism scores. To examine these data, the standardized values on the three affect variables were entered into two separate analyses. First, a 2 (optimists vs. pessimists) by 2 (no expectation vs. positive expectation) by 3 (affect measure: global affect index vs. specific affect index vs. unprompted affect index) between - within analysis of variance (ANOVA) was performed. This analysis revealed only the same Optimism - Pessimism by Expectation interaction, $F(1, 96) = 5.56, p < .05$. The second analysis consisted of a 2 (optimists vs. pessimists) by 2 (no expectation vs. negative expectation) by 3 (affect measure: global affect index vs. specific affect index vs. unprompted affect index) between - within ANOVA. This analysis revealed only the same main effect of the expectation manipulation presented in the regression analysis, $F(1, 66) = 4.21, p < .05$. Importantly, the absence of a significant 3-way interaction in these ANOVAs demonstrates that the effect of the optimism - pessimism and expectation variables on the three affect measures is comparable; that is, the affect measures appear to be producing the same general pattern.
As with the affect data, the thought data were also analyzed by performing a median split ($\text{Mdn} = 16$) on optimism - pessimism scores. These analyses yielded no significant effects. Similarly, a simple contrast derived from the predictions of the AEM (see Wilson et al., 1989) also yielded no significant effect.

Agreement between two coders (both blind to condition) on a subset of the thought data was again high, $r = .88$.

The Study 2 data were also analyzed by conducting a median split ($\text{Mdn} = 17$) on the optimism - pessimism scores. In this analysis, the standardized scores on the three affect variables were entered into separate analyses. First, a 2 (optimists vs. pessimists) by 2 (no expectation vs. negative expectation) by 3 (affect measure: global affect index vs. specific affect index vs. unprompted affect index) between - within ANOVA was performed. This analysis yielded only the same Optimism - Pessimism by Expectation interaction found in the regression analysis, $F(1, 75) = 6.61, p = .01$. The second analysis consisted of a 2 (optimists vs. pessimists) by 2 (no expectation vs. positive expectation) by 3 (affect measure: global affect index vs. specific affect index vs. unprompted affect index) between - within ANOVA. This analysis also revealed only the same main effect of the expectation manipulation found in the regression analysis, $F(1, 65) = 7.59, p < .01$. As in Study 1, optimism - pessimism and the expectation manipulation demonstrated comparable effects across the three measures of affect.

The above unitization-pattern analysis relies on the assumption that the random sample of intervals selected from the entire population of intervals is a representative sample. In the present study, the number of button presses in the average interval for this sample ($n = 105$) was 11.18 with a standard deviation of 8.91, which compares favorably with the corresponding population parameters of 11.82 and 8.73. The sample of intervals did not differ from that of the population, $z = .75, p = .45$. 

Unlike the first two studies, Study 3 and Study 4 did not contain conditions in which the expectation was consistent with the stimulus information. Given the clear results in these conditions in the first two studies, the results of other studies which have included comparable conditions (e.g., LaForce, Geers, & Lassiter, 2000), and the fact that the focus of the present work was to delineate conditions in which inconsistent stimuli are assimilated to or contrasted from an affective expectation, these conditions were not included in the design of the latter two studies.

Agreement between two coders (both blind to condition) on a subset of the thought data was high, $r = .81$.

Agreement between two coders (both blind to condition) on a subset of the thought data was acceptable, $r = .78$.

Finally, the above unitization-pattern analysis relies on the assumption that the random sample of intervals selected from the entire population of intervals is a representative sample. In the present study, the number of button presses in the average interval for this sample ($n = 125$) was 18.35 with a standard deviation of 14.57, which compares favorably with the corresponding population parameters of 18.11 and 14.20. The sample of intervals did not differ from the population, $z = .18$, $p = .86$.

It could be suggested that need for cognition yielded effects similar to those found with optimism - pessimism because the two variables are highly correlated. In a recent study ($n = 50$), however, participants’ scores on both of these variables were collected and participants scores on these measures were not significantly correlated, $r = .22$, $p = .12$. 
References


Appendix A

Expectation Instruction Sheets
Please read the following instructions carefully.

This study is concerned with the psychology of film appreciation. Right now we are in the pretesting stages, where we are just asking students to make some ratings of various movies. What we would like you to do, is to help us in the beginning stage of this project by viewing and rating one movie.

Thus, in this study you will watch one movie in this room on a video recording system (VCR). The movie lasts approximately 5 minutes. When this movie is over, you will be asked to answer some questions concerning the movie. All of your responses to these questions will remain anonymous. If you have any questions, please ask the experimenter before you begin.
Please read the following instructions carefully.

This study is concerned with the psychology of film appreciation. Right now we are in the pretesting stages, where we are just asking students to make some ratings of various movies. What we would like you to do, is to help us in the beginning stage of this project by viewing and rating one movie.

Thus, in this study you will watch one movie in this room on a video recording system (VCR). The movie that you are about to see lasts approximately 5 minutes. It is a very popular movie that has won many awards and has received much praise from other students. When this movie is over, you will be asked to answer some questions concerning the movie. All of your responses to these questions will remain anonymous. If you have any questions, please ask the experimenter before you begin.
Please read the following instructions carefully.

This study is concerned with the psychology of film appreciation. Right now we are in the pretesting stages, where we are just asking students to make some ratings of various movies. What we would like you to do, is to help us in the beginning stage of this project by viewing and rating one movie.

Thus, in this study you will watch one movie in this room on a video recording system (VCR). Although the movie has been described by prior students as tedious and uninteresting, it only lasts approximately 5 minutes. When this movie is over, you will be asked to answer some questions concerning the movie. All of your responses to these questions will remain anonymous. If you have any questions, please ask the experimenter before you begin.
Appendix B

Affect Questionnaire
Please answer the following questions as accurately as possible. Your answers to these questions will not be linked to you in any way. That is, your responses will remain anonymous.

1) How much did you enjoy watching this film?
not at all 1 2 3 4 5 6 7 8 9 very much

2) How funny do you think the film was?
not at all 1 2 3 4 5 6 7 8 9 very funny

3) How pleasant of an experience was it seeing this film?
not at all 1 2 3 4 5 6 7 8 9 extremely pleasant
pleasant

4) Do you own a videotape recorder?
Yes No

5) On average, how many times a month do you go to a movie theater to watch a movie?

6) How much did you think you would enjoy the video after it was explained to you, but before the movie came on?
not at all 1 2 3 4 5 6 7 8 9 very much

7) On the following two lines, please list two of your favorite movies

________________________________________________________________________
________________________________________________________________________
Appendix C

Recall sheet
Think back to the film you just watched. On the following lines please list as many of the actions from the film as you can recall. Please write down only one action per line. Take as much time as you need. Use the back of this sheet if necessary.

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Appendix D

Thought Listing Sheet
On the following lines please list any thoughts you had while watching the film. These should be thoughts that you had when you were actually viewing the videotape. Please list only one thought per line. Take as much time as you need. Use the back of this sheet if necessary.

________________________________________________________________________

________________________________________________________________________

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Appendix E

The Revised Life Orientation Test
Please indicate the extent to which you agree with each of the following items by circling one of the four responses. Try to be as accurate and as honest as possible while making your decisions. Also, try not to let your responses to one item influence your answers to other items.

1. In uncertain times, I usually expect the best.
   
   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree

2. It's easy for me to relax.
   
   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree

3. If something can go wrong for me, it will.
   
   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree

4. I'm always optimistic about my future.
   
   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree

5. I enjoy my friends a lot
   
   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree
6. It's important for me to keep busy.

   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree

7. I hardly ever expect things to go my way.

   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree

8. I don't get upset too easily.

   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree

9. I rarely count on good things happening to me.

   0 strongly disagree
   1 disagree
   2 neutral
   3 agree
   4 strongly agree

10. Overall, I expect more good things to happen than bad.

    0 strongly disagree
    1 disagree
    2 neutral
    3 agree
    4 strongly agree