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# Explanatory Style and Perception of Negative and Positive Daily Events

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Explanatory Style and Perception of

Negative and Positive Daily Events

(TITLE)

BY

Amy K. Jester

**THESIS**

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
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## Abstract

This study investigated explanatory style and people's perceptions of negative and positive daily events. Explanatory style can be measured by rating causal explanations that people give on three dimensions; internality, stability, and globality. College students wrote stories in response to pictures, using the Thematic Apperceptive Test (TAT), and also completed a 28-day Daily Event Log Questionnaire. It was expected that how people explain good and bad events that happen to them, would be the same whether someone was explaining a personal daily event or explaining a story written in response to a picture. To prove this, it was expected that the two measures would have a high degree of correspondence. To test the hypothesis, the TAT and daily log data were coded for explanatory style using the Content Analysis of Verbatim Explanations (CAVE) technique. Results did not show a high degree of correspondence, suggesting that these two measures might tap different aspects of the explanatory style construct. Interestingly, the range of areas of life that will be affected by the cause (the negative global dimension), was the only discriminator of explanatory style, for both measures. Next, it was explored whether the Daily Event Log Questionnaire could help us understand how people who habitually give certain types of explanations perceive their daily events. Results showed that this new measure had similar results to other explanatory style measures. Also, a significant 3-way interaction between valence of event being explained, x range of areas in life to be affected, x type of explanations habitually given, was found. Findings suggest that daily events add to the explanatory style research, and that more study needs to be done to fully understand their place in the literature.

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Explanatory Style and Perception of  
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### Explanatory Style and Perception of Negative and Positive Daily Events

Explanations that people give are windows into their world. Through these windows, a wealth of information can be obtained about the person's perceptions of themselves and the events in their lives. Explanations are a naturally occurring way in which people explain their own, or someone else's behavior. These explanations help people understand the world around them. Studying these explanations can help us understand someone's perceptual framework. In other words, we can better understand how someone obtains knowledge, and how this knowledge shapes their behavior. Also, when people can't come out and tell you directly how or why they're thinking and feeling a certain way, their explanations often provide this information. From these explanations, we can distinguish patterns that can help gain understanding into someone's cognitions and even predict his/her future behavior. Understanding these perceptions, can give a key into a person's personality.

Explanatory style is a cognitive personality variable that is concerned with the causal explanations that people typically give to make sense of or understand good and bad events that involve themselves (Peterson & Seligman, 1984). When people don't understand an event that has happened in their lives, they search for an answer. Causal explanations are a way someone ascribes a certain event to its origin or cause (Peterson, 1992).



Explanatory, (or attributional) style is the cognitive personality variable that has arisen from the reformulated learned helplessness theory (for a review of the Learned Helplessness Theory and the Reformulated Learned Helplessness Theory, see Appendix A). Three dimensions of explanatory style have been specified: internality ("It's me") versus externality ("It's the situation or someone else"), stability (It's going to last forever") versus instability ("It was a one-time thing"), and globality ("It's going to undermine everything I do") versus specificity ("It has no bearing on my life") (Peterson, 1992).

It has been shown that explanatory style appears to be consistent across situations, (Peterson, Seligman, & Vaillant, 1988, and Peterson, & Villanova, 1988) and stable across time (Burns & Seligman, 1989; Nolen-Hoeksema, Girgus, & Seligman, 1986; and Peterson, et al., 1988 for related studies). These findings lend support to Metalsky & Abramson's (1981, p. 38) definition of explanatory (attributional) style. They define it as "a tendency to make particular kinds of causal inference, rather than others, across situations and across time."

Individuals who habitually explain the causes of bad events as being internal, stable, and global are more susceptible to helplessness deficits than individuals who habitually explain causes as being external, unstable, and specific (Peterson, 1992). The first style is usually described as pessimistic, and the latter as optimistic. A pessimistic explanatory style is characterized by the helplessness effects being longer-lasting, generalized, and with a loss of self-esteem. An optimistic explanatory style is characterized by the helplessness

effects being short-lived, specific, and without a loss of self-esteem (Peterson, 1992).

A large amount of explanatory style research has shown that a pessimistic explanatory style correlates strongly with depression (Brewin, 1985; Coyne & Gotlib, 1983; Peterson, Villanova, & Raps, 1985; Sweeney, Anderson, & Bailey, 1986). This linkage has taken place, in large part, because the learned helplessness reformulation defines an attributional framework that predicts helplessness deficits that correlate strongly with depressive symptoms. A pessimistic explanatory style has also been linked to job failure (Seligman & Schulman, 1986), poor work performance, academic failure, and physical illness (Peterson, Maier, & Seligman, 1993).

Much of the research for explanatory style has focused on the explanations of bad events. However, some research has focused on explanatory style for good events, and has offered two generalizations (Peterson & Seligman, 1984). **First**, explanatory style for good events is often independent of explanatory style for bad events. Explanatory style for good and bad events is measured in the same way, using the same dimensions, but the same ratings of these dimensions, can have very different meanings in someone's life. That is, an explanation for a good event that is internal, stable, and global means to the subject that the good event was caused by "me", will last forever, and will effect all areas of my life. This subject is most likely an optimistic person who views life in an optimistic way. An explanation for a bad event that is also internal, stable, and global would also mean that the bad event was caused by "me", will last forever, and will effect all areas of my life, but this person is most likely a pessimistic person who views life in a pessimistic way. One

person cannot have both a pessimistic and optimistic explanatory style at the same time. People view life, good and bad events, in either an optimistic or pessimistic manner. If a person gives an internal, stable, and global explanation for a good event, he or she must give an external, unstable, and specific explanation for a bad event, or vice-versa.

**Second**, the correlates of explanatory style for good events tend to be opposite of the correlates of explanatory style for bad events and usually weaker. That is, attributions for good events that are internal, stable, and global correlate weakly with the **absence** of depressive symptoms, as opposed to internal, stable, and global attributions for bad events that correlate strongly with the **presence** of depressive symptoms (Peterson & Seligman, 1984).

It has been offered that explanatory style for good events influences the degree to which we enjoy our successes (Weiner, 1986). The positive expectations and feelings that are produced by an explanatory style for good events may help buffer us from depressing factors in our lives (Taylor & Brown, 1988). It has also been proposed that explanatory style for good events directly affects how we respond to bad events (Peterson, 1991b). Even though these explanations have been offered, it is difficult to understand the significance of explanatory style for good events, because none of these explanations have been through a sound theoretical examination. Because of this, the theoretical significance of good events has not been well articulated in the published literature, and explanatory style for good events has not been linked to any condition, such as depression, as explanatory style for bad events.

Research into explanatory style for good events may not yield data as rich as explanatory style for bad events because people do not actively search for causes of good events as diligently as they do for bad events (Wong & Weiner, 1981). As a result, their responses may not be as mindful (Langer, 1989) or serious (Taylor & Fiske, 1978) as causes for bad events. Explanatory style has usually been measured with the Attributional Style Questionnaire (ASQ: Peterson, Semmel, von Baeyer, Abramson, Metalsky, and Seligman, 1982), and is now measured with the Expanded Attributional Style Questionnaire (EASQ: Peterson & Villanova, 1988). The original ASQ, is a self-report questionnaire, that presents subjects with 12 hypothetical events, 6 good and 6 bad, and asks them to imagine these events happening to themselves. The subject is then asked to explain the single major cause of each event and then rate this cause on the three dimensions of internality, stability, and globality, using a 7-point Likert scale. The subject is then asked to answer one question about the importance of the event.

The ASQ proved to be a valid measure of explanatory style, but with modest reliability. Internal consistencies of each dimension were in the .4 to .7 range, and most researchers were combining scores from all three dimensions to bolster reliability. To answer the reliability concern, the Expanded Attributional Style Questionnaire (EASQ) was developed. The EASQ is also a self-report questionnaire that presents the subject with 24 hypothetical bad events. To improve reliability, it was lengthened to 24 events, and since the learned helplessness reformulation is not explicitly concerned with good events, they were not included (Peterson & Villanova, 1988). As with the ASQ, the

subjects are asked to imagine these events happening to themselves, and then explain the one major cause of each event and rate this cause on the three above mentioned dimensions, using a 7-point Likert scale. Ratings are then averaged across events to form an estimate of a subject's explanatory style. According to Peterson & Villanova (1988), this questionnaire has been proven a reliable and valid measure of a subject's explanatory style; as predicted, increasing the number of bad events presented, improved the internal consistency of this measure. As with the ASQ, stability and globality were highly correlated, with internality being largely independent of the other two dimensions (Peterson et al., 1982; Peterson & Villanova, 1988). These patterns among these dimensions were expected, and are seen throughout the explanatory style literature (Peterson, 1991b). Stability and globality are usually directly related. So much so, that it has been proposed that a global cause is necessarily a stable one, because it must last long enough to influence outcomes in different domains. Internality is sometimes directly related to stability and globality and sometimes not (Peterson, 1991b). Whether a subject feels a cause is internal or external, the cause has to last long enough to influence all areas of a subject's life. It is because of these reasonings, that the above mentioned patterns show through.

These questionnaires, the ASQ and the EASQ, have been employed in hundreds of investigations examining the relationship between explanatory style and its link to depression, school achievement, athletic performance, morbidity, and mortality (Peterson, 1992). Even though these questionnaires are widely used, the scope of the events utilized

(hypothetical events) limits the data obtained. Even though explanatory style can be assessed from causes given to hypothetical events, they are not real-life experiences of the subjects. A truer test of explanatory style would be obtained if the measure was applied to the subject's real life or personal experiences.

To combat the above mentioned problem of obtaining limited data, another measure of explanatory style was developed, the Content Analysis of Verbatim Explanations (CAVE) technique (Peterson, Schulman, Castellon, & Seligman, 1992). This technique is used to scan a subject's verbal or written material for naturally occurring events along with accompanying causal explanations. These causes are then rated along the same three dimensions as in the EASQ. This technique has broadened the range of subjects that can be studied. With the ASQ and the EASQ, subjects were limited to those people who were available and willing to complete the measure. Now with the development of the CAVE technique, causal explanations have been found in materials such as newspaper quotations, therapy transcripts, diaries, political speeches, autobiographies, audiotaped diagnostic interviews, personal letters, essays, (Peterson, 1992) and stories written in response to pictures as with the Thematic Apperceptive Test, the TAT (Peterson, 1994). Subjects who were before inaccessible to researchers, can now be accessed as long as the subject has either spoken or written material. This is a naturalistic rather than experimentally controlled technique, which allows the researcher to travel back and forth in time, conducting studies in a nonobtrusive way. Also, nonobtrusive research methods are

preferable to techniques that are invasive and run the risk of producing prompted causal explanations not otherwise offered in everyday life.

Both the ASQ and the CAVE technique can be invasive research methods. The ASQ asks subjects to report their reactions to a **hypothetical** experience. Data that is CAVED can be obtained from subjects who are asked to involve themselves in these **hypothetical** experiences, or subjects can be asked to identify themselves with **fantasy based** situations, as in writing a story in response to a picture. The circumstances under which causal explanations are given without prompting are precisely those under which subjects are most likely to be the most mindful and honest, and most apt not to respond automatically as they might on a questionnaire (Weiner, 1985). For this reason, "CAVEing" a subject's own sample of written material, such as a diary, is a valuable research measure. This circumstance provides a more naturalistic way of assessing explanatory style.

Past longitudinal studies have asked subjects for diary samples from years before and the present, to ascertain whether explanatory style is consistent over time (Burns & Seligman, 1989). The samples from both points in time are CAVED for explanatory style, and the subject's style from both times is compared. Burns and Seligman (1989) showed that explanatory style is consistent when taken at different points in time. If explanatory style is consistent at different points in time, then explanatory style should be consistent from day to day. If subjects possess different explanatory styles that can be measured in the laboratory and by the use of questionnaires, they may also interpret their everyday

experiences through these styles. The reformulated theory of learned helplessness hypothesized that people learn from past experiences and carry this learning over to different experiences. This learning is manifested through the causal explanations people give to explain their world. These causal explanations, in turn, may serve to maintain a person's view of the world on a daily basis.

This study will investigate the differences, if any, found between using a fantasy based and reality based measure of explanatory style. Stories written in response to TAT pictures have been employed as a measure of explanatory style (Peterson & Ulrey, 1994).

The TAT is a projective test that is widely used to study many areas of personality. English and English (1958) define a projective test as

"A relatively unstructured yet standard situation to which a testee is asked to respond, but with as few restrictions as possible upon the mode of response, e.g., a picture of clouds may be shown with the request: "Tell me about this." (English & English, 1958, p. 413)

The directions and administration of the TAT pictures in the current study are derived from Atkinson (1958). The subject is asked to write a story in response to pictures of everyday social situations. The subjects, also, are asked to write interesting, dramatic, and imaginative stories. It is postulated that, since the situation and directions do not specify the response, one's enduring propensities will determine the response (English & English, 1958). Test responses are usually analyzed for personality characteristics, but they may also reveal certain modes of cognition (English & English, 1958). The TAT is a valuable



tool because the subject projects his or her ways of thinking, feeling, and perhaps acting through the choice of the portions of stimulus to which he or she responds, and the manner in which he or she organizes these perceptions (Murstein, 1963).

According to its instructions, this measure can be considered fantasy based. A subject is shown a picture, and then asked to write a story about that picture. It has been shown that explanatory style, as a personality construct, can be measured reliably with fantasy based techniques (Peterson & Ulrey, 1994).

For decades, personality psychologists have been interested in people's thoughts, feelings, and behaviors and how they fluctuate or change over time. Lazarus (1978) believed that in order for the field to advance, investigators needed to shift from examining a single individual difference on an isolated occasion, to exploring processes and patterns of relations that unfold over time. Epstein (1982) argued that if we define personality as relatively stable reaction tendencies that distinguish individuals from one another, we are obliged to inspect "responses of multiple individuals on multiple measures over multiple occasions..." (p. 91). Many studies of daily experiences in which individuals recorded their momentary thoughts, feelings, and behaviors in response to a stimuli were subsequently initiated (Larsen, 1990). This "experience sampling method" presented a new perspective on everyday behavior and provided a means to conceptualize how personality characteristics and social contexts interact to shape experience (Tennen, Suls, & Affleck, 1991).

Since the Experience Sampling Method (ESM; Csikszentmihalyi & Larson, 1987) studies psychological processes in their natural context, this measure is considered reality based. The subjects are not asked to involve themselves in a story, or a hypothetical event. The subjects are asked to report experiences that are happening to them on a daily basis.

Daily experience research has become more cognitive in that it is more concerned with the perceiver's subjective reality than with given behaviors (Woike, 1995). In this study, I sought to examine how explanatory style influences perceptions of one's daily experiences. Most past work has focused on explanatory style that has been obtained by measures that utilize hypothetical events (ASQ & EASQ), or require the subject to write fantasy based stories in response to pictures, such as TAT pictures. Then, from the explanatory styles obtained from these measures, inferences were made about the perceptions of one's real life experiences. In this study, I planned to study the relationship between explanatory style as measured in fantasy (via. the TAT), with explanatory style from individual's daily recollections of good and bad events.

Specifically, the purpose of the present investigation is twofold. **First**, to date, the CAVE technique has never been applied to naturally occurring daily events over a period of time. I assumed since everyday personal experiences can be scanned for events and accompanying causal explanations, that the CAVE technique is applicable to everyday personal experiences. If so, we would expect a subject's CAVED daily experiences (perceived daily experiences) to correlate with their CAVED TAT (projected fantasies)

data. Also, since explanations from daily events involves multiple samplings of behavior (Csikzentmihalyi & Larson, 1987), instead of being administered at one point in time as with the TAT, this method may prove to be useful in better understanding explanatory style.

**Second**, the scope of research that has focused only on good events, up to this point, has been very limited. Explanatory style for good events can be measured through the same methods used to measure explanatory style for bad events. Researchers, however, have not been able to measure an explanatory style for good events that is stable and reliable across time and situations, as has been done for bad events. Also, as stated earlier, a definitive relationship between explanatory style for good and bad events has not been ascertained. It has been suggested that explanatory style for good and bad events is independent of each other, and that the correlates of explanatory style for good and bad events are opposites (Peterson & Seligman, 1984). If this is true, people who habitually explain events with positive explanations should differ from people who habitually explain events with negative explanations. Also to be examined, would be differences between people who habitually give both negative and positive explanations, and people who give neither negative nor positive explanations. I wanted to examine whether using a daily measure of good events would help us understand the nature of good events as they relate to explanatory style, and also if using this measure might give us insight into the above mentioned differences.

### Hypotheses

If the explanatory style personality construct is reflected the same way for one's perceived daily experiences and projected fantasies, one would expect a high degree of correspondence between the two measures. Specifically, it would be expected that;

1. The negative stable and negative global dimensions of the TAT data would directly correlate with the negative stable and negative global dimensions of the daily event log data.
2. The positive stable and positive global dimensions of the TAT data would directly correlate with the positive stable and positive global dimensions of the daily event log data.

Past research has typically examined subjects who gave negative explanations to bad events. These studies have neglected the subjects who gave positive explanations, both negative and positive explanations, and neither negative nor positive explanations, in response to good and bad events. In the present study, I wanted to examine these different types of explanations, and how these subject's with these different types, perceived their daily experiences. Hopefully, utilizing this new measure while examining these different types of explanations, will help us understand how people who give these different types of explanations perceive in their daily events.

## Method

### Subjects

Research participants were fifty-seven volunteers, (51 women and 6 men) enrolled in Social Psychology courses at Eastern Illinois University, who completed all the necessary measures according to the instructions and received extra credit for their participation.

### Personality Measures

#### Thematic Apperception Test (TAT)

Thematic apperceptive pictures were used as the fantasy based measure of explanatory style. Subjects wrote stories in response to six pre-chosen (TAT) pictures (Smith, 1992) that elicit neutral themes. Past research has utilized TAT pictures that elicit negative themes (Peterson & Ulrey, 1994). The use of these pictures has insured stories that are full of negative event-explanation units. Even though the neutral pictures did not supply stories that were full of negative event-explanation units, I wanted to use TAT pictures that would be closer to real-life, everyday personal experiences. Descriptions of the pre-chosen pictures follows:

1. Two people (male and female) sitting on a park bench.
2. A man sitting at a desk upon which sits a photograph of a family.
3. A (male) ship captain talking to another man.
4. A male and female trapeze artist; male catching female who is in mid air.
5. Two women working in a laboratory.
6. An older man and younger woman walking in a field, with horses and a dog.

The administration followed the standard group procedure outlined by Atkinson (1958), in which subjects were given 5 minutes to write a story in response to each of six pictures.

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See Appendix B  
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Each story was analyzed for causal explanations that were identified and coded for explanatory style using the Content Analysis of Verbatim Explanations (CAVE) technique (Peterson et al., 1992).

#### The Daily Event Log Questionnaire

The daily event log questionnaire is a self-report measure that instructed the subjects to report self-perceived most positive and most negative experiences along with their causes. This questionnaire was modified and developed from the original Most Memorable Experiences Questionnaire (MMEQ) (Woike, 1995). The daily event log questionnaire was identified as the reality-based measure of explanatory style for this study. At the beginning of a 28 day period, subjects were given the daily event log questionnaire which consists of a page of instructions and pages of blank lines that are pre-dated for the 28 days. The directions read as follows:

"For the next 28 days, take time at the end of each day and think about everything you have experienced in the past 24 hours. Decide which event of the day you would consider the most positive, and which event you would consider the most negative. These events need not have any significance to anyone else, they need

only be important to you. Then, write objective descriptions of these two events. By objective, I mean concise descriptions that give an accurate account of the event and any relevant details. Also, describe the primary cause of the event as you understand it. Some events clearly have more than one cause. Choose the cause you consider the most important to the event. Explain the event and cause in a way that others will understand the context as if they experienced the event themselves. Please, be sure to complete the log entry every day. Hint: It might be helpful in remembering to do your log entry, if you complete it the same time each day. In addition, you must consider what you believe to be the primary cause of the event and then rate the cause on three 7-point (Likert) scales. This procedure must be repeated on every event."

### Procedure

Since the study was conducted on a volunteer basis, those who participated were identified only through the use of the last four digits of their social security number. During a single session, at the beginning of the 28-day period, the subjects completed the Thematic Apperception Test (TAT) and were given the daily event log questionnaire with its instructions. The daily event log questionnaires were collected weekly. At the end of the 28 days, the subjects returned their remaining daily event log questionnaires. At that time they were thanked for their participation and given some general information about the investigation.

### Coding the measures

It has been found that any spoken or written material can be analyzed for events and causal explanations (Peterson et al., 1992). Therefore, the causal explanations for these events are spontaneously mentioned, and in many cases can be assessed for an individual's explanatory style. The coding procedure used to extract these events and causes is a content analytic technique called Content Analysis of Verbatim Explanations, or the CAVE technique (Peterson et al., 1992). This technique was followed for coding the TAT and Daily Event Log Questionnaire data. The following description is derived from Peterson et al, (1992).

The CAVE technique is conducted in two steps: 1) extracting verbatim causal explanations, and 2) rating them on 7-point scales according to 3 dimensions: internality ("It's me") versus externality ("It's the heat in this place"), stability ("It's going to last forever") versus instability ("It was a one-time thing"), and globality ("It's going to undermine everything I do") versus specificity ("It has no bearing on my life"). These two content analysis steps have been proven reliable, according to attribution theory in general, as a good assessment strategy (Peterson et al, 1992). Coders were trained in assessment through the explanatory style scoring manual (Peterson et al., 1992). An event is defined as any discrete occurrence that has a good or bad impact on the individual. Events can be entirely within a person ("I was stressed about a test"), or something imposed from without ("My parents got mad"). Events that are extracted may occur in the past, present, or future, and it is very important that events be good or bad as judged from the



perspective of the subject, not the researcher. Ambivalent events that have good or bad elements in combination, neutral events, and events that do not directly impact on the individual, are not analyzed because they are too difficult to clearly link with a causal relationship. Accordingly, any event that was judged by a coder to be too ambiguous to score was not used (Peterson, 1992).

Once the event was identified and the valence of the event was determined, the attributed factor that preceded and covaried with it was then also identified. Possible causes can include: 1) other events ("I was tired all day **because I had only four hours of sleep**"); 2) situational factors ("I was late for an appointment **because the roads were slippery**"); 3) behaviors of the subject or others ("I failed the quiz **because I didn't listen to the lecture**"); 4) dispositions ("I fought with my roommates **because they were crabby**"); 5) experience ("I was offered the job the second time I applied **because I'm older now**"). The cause sometimes must be inferred from statements such as "because", "as a result of", or "this led up to". An identified event and explanation should include enough information for the rater to be able to rate the internality, stability, and globality of the cause.

This procedure was conducted by this researcher and an undergraduate research assistant. A preliminary test was carried out in two parts to establish accurate agreement of the coders' use of the coding system. Each coder extracted event-explanation units from half of the TAT data only, because the Daily Event Log Questionnaire already asked the subject for the major cause of the event. Each coder then read 10% of the other

coder's total extractions to check for agreement in their event extractions, and the valence of the extractions (10% of total extractions = 51). The two researchers were in exact agreement with 93% of their extractions (agreement = 47). After agreement was reached on the first step of the coding procedure, each coder finished extracting event-explanation units from the TAT data. These units were then randomized and given to the other coder to be rated on the three dimensions.

### Scoring Categories

Definitions with examples of the three scoring categories used in the CAVE technique (Peterson et al, 1992) are given below.

#### Internality versus Externality

This dimension attempts to measure the extent to which individuals blame themselves for bad events or credit themselves for good events. The 7-point scale is divided into three regions:

- 1. Scale point 1**, when the individual attributes blame or credit to someone or something completely external to the self. This rating includes causes that mention another person's actions or characteristics, the difficulty or ease of a task, time, a natural disaster, circumstances, or the weather.
- 2. Scale points 2 to 6**, when the individual attributes the cause of an event to some combination or interaction of internal and external factors. Ratings of these points are made when explanations divide blame or credit between the self and another person, or between the self and the environment. A 2 or 3 rating would include

causes that refer primarily to another person or the environment. A 4 rating would include causes that split the blame or credit equally between the self and another person, or between the self and the environment. A 5 or 6 rating would include causes that refer primarily to the self.

- 3. Scale point 7**, when the individual attributes the behavioral, physical, or mental characteristic solely to internal causes. A 7 rating would include causes that refer to the individual's own traits, behavior, decisions, (in)ability, motivation, knowledge, disability, illness, injury, age, and social or political or demographic classifications.

#### Stability versus Instability

This dimension determines the persistence of a cause, whether it is chronic (stable), or transient (unstable). Response choices range from 1 ("will never again be present") to 7 ("will always be present"). There are four considerations that determine how this dimension is rated.

- 1. Tense** of the cause. If the cause of the identified event is phrased in the past tense ("because I had a lot of homework"), the rating should be less stable than if it was in the present tense ("because I have a lot of homework").
- 2. Probability** of the cause. A cause unlikely to occur again in the future ("because he has cancer"), should be less stable than a cause that is likely to occur again ("because I overslept").

3. Whether the cause is **intermittent or continuous**. Bad weather, for example ("because it was very hot"), is intermittent and less stable than a trait ("because I am moody"), which would be continuous.
4. Whether the cause is **characterological or behavioral**. Character traits (e.g., "I am smart, lazy, decisive") should be more stable than particular behaviors (e.g., "I did a smart thing, a lazy thing, a decisive thing").

#### Globality versus Specificity

This dimension reflects the extent to which a cause influences an individual's life. Does it affect many areas (global), or just a few (specific). This dimension can be difficult to rate because the raters may not have enough information about the subject to determine how widespread the effects of the cause may be on the individual. Because of this, the effects of the cause may need to be rated by how they would affect a **generic** individual's life. Two categories are distinguished to rate the events in an individual's life.

1. **Achievement** - This category includes occupational or academic success, one's acquisition of knowledge or skills, attainment of a sense of individuality or independence, and economic or social status.
2. **Affiliation** - This includes the quality of intimate relationships, one's sense of belongingness or societal integration, sex, play, and marital or family well-being.

Causes can affect some or many events in one or both categories. A 1 rating would include a cause that is specific and affects one category. A 2 or 3 rating would include causes that affect one category and possibly parts of the other. A 4 or 5 rating would

include causes that affects parts of both categories. A 6 or 7 rating would include causes that affects most of both categories. The greater the impact of the cause, the higher the globality rating. For example:

Event: I've had to cut back on my level of activity

Cause: Because of my stroke. (Rating = 4 or 5)

This example affects parts of both categories, and because of this the globality rating is going to be scored higher than an example that is affecting only one category (Peterson, 1992).

To complete the second part of the preliminary coding, each coder, again, read 10% of the other coder's ratings on the three dimensions, of the total extracted units. Exact agreement was reached in 90% of the units extracted (agreement = 46). To increase the coders understanding of the coding system, the remaining 10% of the units that the coders were in disagreement over (5 units), were broken down by the three dimensions and resolved through discussion. All the ratings of explanatory style were made by two coders who were unaware of the subjects' identity. To ensure coders' unawareness of the subject's identity, all event-explanation units were randomized with events from other subjects. This random presentation prevented raters from developing a response set toward a given subject on the basis of their assessment of responses typically made by that subject. Previous research (Peterson & Seligman, 1986) has demonstrated that ratings can be made reliably with interrater agreement in the .70 - .95 range.

## Results

### Correlational Analyses

First, a correlational analysis was conducted on the TAT and Daily Event Log Questionnaire data. Subjects who had four or more negative events in their TAT data were used ( $n = 11$ ). Some subjects had four or more negative events plus four or more positive events ( $n = 13$ ). All of these subjects' event-explanation units (positive and negative) were coded, and their ratings were used in the correlational study. Based on this criteria, out of the original 57 subjects, 24 subjects' TAT and Daily Event Log Questionnaire data were utilized; this is similar to Peterson & Ulrey (1994). Correlations among the dimensions within each measure were analyzed. It has been shown that examining the dimensions separately can be valuable in understanding the interrelations among the dimensions defining the explanatory style construct (Peterson, 1991a). The explanatory style dimensions of the TAT that were studied were: negative stable, negative global, positive stable, and positive global. The internal dimension of explanatory style was not utilized, because the events explained in the TAT stories did not happen to the subjects themselves. This procedure follows past research (Peterson & Ulrey, 1994).

The explanatory style dimensions of the Daily Event Log Questionnaire that were studied were: negative internal, negative stable, negative global, positive internal, positive stable, and positive global.

Table 2 presents the correlations among the TAT variables. It was expected that the two negative variables would be directly related, and so would the two positive variables,

because when the stable and global dimensions are of the same valence, they are directly related and highly significant (Peterson & Seligman, 1985). Also, because a definitive relationship between explanatory styles for good and bad events has not been ascertained (Peterson & Seligman, 1984), it was expected that the negative and positive variables would not show a consistent relationship. There was only one direct correlation.

Inspection of Table 2 reveals that the positive global and positive stable variables were related and highly significant,  $p < .0001$ . This is a pattern that is usually seen among the negative variables (Peterson & Seligman, 1985). This may show that when someone gives an explanation for a good event, they think the stable and global dimensions are strongly and directly related. That is, they feel the cause has lasted long enough to affect all areas of their life, or the cause hasn't lasted long enough to affect many areas of their life. Since this pattern is being seen among the positive variables, this may show that explanatory style for positive events can be measured in the same way as explanatory style for negative events, and that the relationship between the dimensions (stable and global) is the same for both positive and negative events. Interestingly, the negative global and negative stable variables were also directly correlated, but their relationship was not significant. This pattern was not expected, and may be due to the nature of the TAT pictures that were used. The TAT pictures used were neutral in nature so they would be as close to everyday personal events as possible, and did not elicit as many negative explanations as positive explanations (See Table 1). This was different methodology than is usually employed (Peterson & Ulrey, 1994). Typically, TAT pictures are used that are negative in

nature and therefore elicit more negative themes. Due to the small sample size of negative extractions from the TAT data, correlations should be interpreted cautiously.

Table 3 presents the correlations among the Daily Log variables. The two correlations among the negative variables revealed a direct relationship. There was a strong direct correlation between the negative global and negative stable variables,  $p < .01$ . This finding is consistent with the pattern many researchers typically find among the explanatory style variables (Peterson & Seligman, 1985). The negative global and negative internal variables were inversely correlated, which could corroborate the idea that the internal dimension's relationship with the stable and global dimensions has yet to be defined (Peterson et al., 1982; Peterson & Villanova, 1988). Because patterns are being seen between the three dimensions as have been seen in other explanatory style measures, this could lend support for the idea that explanatory style can be measured through daily events data, and that this daily event method measures the same underlying construct.

Only one correlation among the daily log positive variables was directly related. The positive stable and positive internal relationship was significant, which may suggest that when someone gives an explanation for a good event the cause will be long lasting only if the person feels he or she was the cause of the event. Likewise, the cause will not be long lasting if someone or something else was the cause of the event. Even though all of the positive variables were included to explore good events as thoroughly as possible, they were not expected to yield consistent results, because past research has viewed them as inconsistent (Peterson & Seligman, 1984).



As can be seen in Table 3, the three correlations (internal, stable, and global) between the negative and positive dimensions, were all directly related. The correlations between the two stable and global dimensions are highly correlated and of significance,  $p < .0001$  and  $p < .0004$ , respectively. In these data it appears that the correlates for good and bad events are not opposites, as has been proposed, as they are for TAT data (Peterson & Seligman, 1984).

Next, a correlational analysis between the explanatory style dimensions of the daily log data and the TAT data was conducted. Table 4 presents the correlations between the TAT and Daily Log variables. The negative global dimension of both the TAT and daily logs were directly related,  $p < .05$ . It was expected that people's explanations of daily experiences would match their projected fantasies, but the only dimension that was directly related was the negative global dimension. This result may suggest that explanatory style derived from TAT stories and daily experiences are not the same. That is, these two measures are measuring something different, tapping different aspects of the explanatory style construct. Also, one would wonder where the negative global dimension fits into the explanatory style picture. Maybe, the negative global dimension is a strong discriminator, in some capacity, of explanatory style, and we have not discovered how to utilize it properly.

Interestingly, the negative stable dimension of the TAT data was inversely related to the positive global dimension of the daily log data,  $p < .02$ . This result may corroborate the idea that the positive and negative dimensions are independent of each other, and that

their correlates are opposites (Peterson & Seligman, 1984). Also, the stable and global dimensions are usually strongly, directly correlated when they are of the same valence. The fact that they are inversely related when they are of different valences, may add support for this strong relationship.

### ANOVA Analyses

#### **Between-Subject Analyses**

Based on the TAT data, we were able to place the subjects in one of 4 groups ( $n = 57$ ). Subjects had to give event-explanation units that were judged either positive, negative, or neutral. Neutral events were events that were judged to be too ambiguous to score. A subject had to have at least four units of the same valence to be included in a category. According to these criteria 4 groups were formed: negative (only negative units,  $n = 11$ ), positive (only positive units,  $n = 18$ ), both (both negative and positive units,  $n = 13$ ), neither (neither negative nor positive units,  $n = 15$ ) (See Table 1). The daily logs of these subjects were then examined. Mean daily ratings on the 3 dimensions of the daily logs, (internal, stable, and global), for both positive and negative events were used. These six measures were examined within a 4 explanatory style: (negative vs. positive vs. negative + positive vs. neither), ANOVA framework.

The ANOVA for the negative global dimension yielded a highly significant main effect,  $F(3,53) = 4.77$ ,  $p < .005$ . This result supports previous findings of this study that hint at the negative global dimension being a strong discriminator of explanatory style.

The correlational analysis, in this study, between the two measures resulted in only the negative global dimension being directly correlated.

Table 5 displays the means of the six ratings from the 4 explanatory style groups. Simple effects tests of the negative global means revealed that subjects who gave all negative explanations had higher global ratings for negative events than did subjects who gave all positive explanations. This was of importance because it was expected that subjects in the positive group would tend to give explanations that reflect a positive explanatory style, and that would show through in their dimension scores, and likewise, the negative group would give negative explanations that reflect a negative explanatory style. These explanatory styles were reflected in the negative global dimension scores. This result seems to suggest that how people explain the extent of a cause's effects on areas of their life, is the strongest hint at a person's explanatory style.

Mean ratings for positive daily experiences for internal, stable, and global dimensions and mean ratings for negative daily experiences for the internal and stable dimensions yielded nonsignificant results.

### **Within-Subjects Analyses**

A mixed model ANOVA with the four explanatory style groups as between-subject variables and valence of daily experiences (negative vs. positive) and type of rating (internal vs. stable vs. global) as within-subject variables was conducted to thoroughly examine the data.

There was a significant 3-way interaction for Valence x Type x Group,  $F(6,53) =$

3.31,  $p < .005$ . This indicates that people who habitually give a certain type of explanations have different ratings for good and bad daily events on different dimensions. In other words, when asked to give a cause for a bad event, people who habitually give negative explanations for good and bad events, feel that a bad event is going to affect all areas of their lives, more so than people who habitually give all other types of explanations. Also, people who habitually give positive explanations for good and bad daily events, are more likely to feel that a bad event isn't going to affect many areas of their lives. This can be seen in Table 5. Also, this analysis yielded a main effect for Type,  $F(2,53) = 148.30$ ,  $p < .0001$ . All subjects had higher ratings on the stable dimension  $M = 4.31$ , than on the internal dimension  $M = 4.00$ , or the global dimension  $M = 2.52$ . Analyses yielded a significant Valence x Type interaction,  $F(2,53) = 16.51$ ,  $p < .0001$ . The univariate results were consistent with the separate ANOVA results presented above.

### Discussion

The present study sought to examine subjects who typically give certain types of explanations (negative, positive, both negative and positive, and neither negative nor positive), and how these people perceive their daily events. In studying these subjects, exciting patterns were found. By utilizing the Daily Events Log Questionnaire while examining these different types of explanations, a within- subjects analysis uncovered a significant 3-way interaction between Valence x Type x Group. Simplified, this means that someone who habitually gives negative explanations for good and bad daily events, is more likely to feel that a bad event is going to affect all areas of his or her life, than are

people who habitually give all other types of explanations for good and bad events. Also, someone who habitually gives positive explanations for good and bad daily events, is more likely to feel that a bad event isn't going to affect many areas of his or her life, than are people who give all other types of explanations.

Why this interaction takes place could have to do with past learning, and maintenance of beliefs. When asked to explain a certain event, people look at past experiences and their effects, and carry this learning forward to the present. Possibly when remembering a past experience, the range of areas of life that were affected by a cause, (the global dimension), was the area where the helplessness effects "were the most painful or least painful". Either way, this might explain why the global dimension has shown itself to be the strongest discriminator of explanatory style.

Also, maybe the people who habitually give all negative or all positive explanations have the strongest maintenance of belief system. Possibly their past learning is being maintained better, or stronger, than people who habitually give both negative and positive explanations and people who give neither negative nor positive explanations, because their past learning has been predominantly either negative or positive. But, do these people have predominantly negative or positive past learning experiences because that is what has happened to them in life, or are these the types of events that they **chose** to learn from? This and many other questions will need to be examined and answered because of this interaction. Further studies need to be undertaken that examine all three factors in the interaction, and their relationship to past learning, maintenance of belief systems, and

explanatory style. In understanding these factors separately, we can better understand their relationships to each other.

Another pattern emerged from examining the subjects in their groups. The subjects that gave different types of explanations were placed in four groups, (negative, positive, both, and neither), and their daily log data was examined using a between-subject analysis. The ANOVA for the negative global dimension yielded a significant result. Simple effects tests of the negative global means revealed that subjects who gave all negative explanations had higher global ratings for negative events than did subjects who gave all positive explanations. This was of importance because it was thought that subjects in the positive group would tend to give explanations that reflect a positive explanatory style, that would show through in their dimension scores, and likewise, the negative group would give negative explanations that reflect a negative explanatory style. Explanatory style for negative and positive events is measured in the same way, using the same ratings, but the meanings for each have different implications. For example, an internal, stable, and global rating for a negative event would mean the subject feels the cause is attributed to him/her, is going to be long lasting in his/her life, and effects all areas of his/her life. These feelings would be associated with a lack of self-esteem, hopelessness, and depression. For a positive event, the ratings would carry the same feelings, but these feelings would be associated with a presence of self-esteem, hopefulness, and an optimistic outlook of the world. As expected, these explanatory style were reflected in the negative global dimension scores. This result seems to suggest that

how people explain the extent of a cause's effects on areas of their life, is the strongest hint at a person's explanatory style. This pattern also showed through in the correlational analyses. When the two measures (TAT and daily logs) data were analyzed, the negative global dimensions were directly correlated. This suggests that at least on this one dimension, the two measures were measuring the same construct. Possibly the negative global dimension is the strongest and most consistent dimension of explanatory style, which could make it a strong discriminator of explanatory style.

Since the Daily Events Log Questionnaire is a new measure, it had to be examined to ensure it was measuring explanatory style. It was found that data from this new measure had similar results to other explanatory style measures. The negative stable and global dimensions were strongly correlated, and the negative internal dimension was inversely correlated to the global dimension. These findings lend support to past research that has shown that the negative stable and negative global dimensions of explanatory style are strongly correlated (Peterson & Seligman, 1985), and that the negative internal dimension's relationship with the negative stable and negative global dimensions, has yet to be defined (Peterson et al., 1982). The results of the positive dimension correlations did not show a consistent pattern. This also, supports past research that views explanatory style for positive events as inconsistent (Peterson & Seligman, 1984). Results from the daily log data show the same patterns of relationships as past explanatory style data from other measures (ASQ, EASQ, & TAT data). These results may suggest that daily

experiences data should be studied further, and that data obtained by this measure may be valuable in explanatory style research.

Next, it was hypothesized that people's explanatory style derived from their daily experiences would, in some way, be related to their explanatory style from projected fantasies. But, when the subject's TAT and daily log data were examined, three of the four dimensions were inversely correlated. This may suggest that explanatory style derived from TAT stories and daily experiences are not the same. Suggesting that these two measures are measuring something different, tapping different aspects of the explanatory style construct. Notably, for the purpose of this study, TAT pictures that elicit neutral themes were used. This was different methodology than has been used in past research (Peterson & Ulrey, 1994). Usually, pictures that elicit negative themes are employed.

At a closer glance, these findings seem to be confusing. Two measures that were trying to measure the same individual difference of explanatory style, were each able to measure explanatory style with similar correlations to an external criterion, but were only able to correlate with each other on one dimension.

One possible explanation for this discrepancy may be that the type of TAT pictures that were used did not elicit enough negative event-explanation units. Six pre-chosen TAT pictures that elicit neutral themes (Smith, 1992) were chosen for this study. I wanted the stories written from these pictures to be as close to real-life everyday situations as possible, so they would come close to matching the subjects' entries in their daily logs.



Because of the neutral themes that were elicited, the number of negative extractions was comparatively very small. Did the small number of negative extractions hinder this study, or are these two measures tapping different aspects of the same explanatory style construct? Any differences that these methods may have caused needs further research to address the differences and their importance in explanatory style research.

Further research should duplicate this technique, but ensure a much larger sample size. In doing this, the concern with the small sample of negative extractions would be answered. Also, further insight into the explanatory style construct, and how these two measures are tapping it, would hopefully result.

Interestingly, the negative global dimension was the only dimension between the TAT and daily log data that was directly related. Once again, as with the ANOVA results, the negative global dimension is the strongest, or most enduring, discriminator of explanatory style. In an effort to better understand its importance, future studies should examine this dimension and where it fits in relation to the internal and stable dimensions concerning the learned helplessness reformulation? Research needs to be undertaken that isolates the separate dimensions and monitors their effect on explanatory style.

As always, further research into explanations for good events needs to be done. Explanatory style for positive events still seems to be a huge question.

It has been shown that explanatory style can be measured through daily events data. By using this daily event method we were able to more closely examine people's explanations. Through this examination, we uncovered that the negative global dimension

could be a strong and stable discriminator of explanatory style. Also, a significant 3-way interaction was discovered between a person's habitual type of explanations, the valence of event being explained, and the range of areas of life that will be effected.

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TABLE 1

Frequency of Subjects by Types of Explanations Given

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		<u>POSITIVE</u>	
		<u>Present</u>	<u>Absent</u>
<u>NEGATIVE</u>	<u>Present</u>	13	11
	<u>Absent</u>	18	15

TABLE 2

Correlations Among TAT Variables

VARIABLE	1	2	3	4
1. Negative Stable	--			
2. Negative Global	.12	--		
3. Positive Stable	-.04	-.37	--	
4. Positive Global	-.17	-.04	.74*	--

Note: \* =  $p < .05$ ,  $n = 24$

TABLE 3

Correlations Among Daily Log Variables

<b>VARIABLE</b>		1	2	3	4	5	6
1.	Negative Internal	--					
2.	Negative Stable	.07	--				
3.	Negative Global	-.30	<b>.51*</b>	--			
4.	Positive Internal	.03	.16	-.10	--		
5.	Positive Stable	.03	<b>.70*</b>	.25	<b>.47*</b>	--	
6.	Positive Global	-.37	.21	<b>.67*</b>	.11	.29	--

Note: \* =  $p < .05$ ,  $n = 24$

**TABLE 4**

**Correlations Between TAT and Daily Log Variables**

<b>TAT Variables</b>	<b>Daily Log Variables</b>					
	<b>Negative Internal</b>	<b>Neg. Stable</b>	<b>Neg. Global</b>	<b>Positive Internal</b>	<b>Pos. Stable</b>	<b>Pos. Global</b>
Negative Stable	-.28	-.06	-.18	-.15	-.09	<b>-.46*</b>
Negative Global	-.21	-.04	<b>.40*</b>	-.28	-.04	.17
Positive Stable	-.07	-.10	-.29	.05	-.10	-.04
Positive Global	-.07	-.08	-.21	.20	-.05	-.11

Note: \* =  $p < .05$ ,  $n = 24$



**TABLE 5**

Mean Scores of the Six Ratings from the 4 Explanatory Style Groups.

<u>Explanatory Style Types</u>	<u>Daily Events</u>					
	<u>Negative Events</u>			<u>Positive Events</u>		
	Internal	Stable	Global	Internal	Stable	Global
Negative	3.76	4.11	<b>3.16a</b>	4.06	4.29	2.42
Positive	3.91	4.09	<b>2.23a</b>	3.99	4.44	2.21
Both	3.68	4.13	2.89	4.34	4.32	2.58
Neither	4.26	4.39	2.68	3.97	4.66	2.33

Note: Common subscripts indicate the means differ at  $p < .05$ ,  $n = 57$

Appendix A

Explanatory style is a product of the reformulation of the learned helplessness model (Overmier and Seligman, 1967). The original learned helplessness theory was developed in animal laboratories, (Overmier & Seligman, 1967, and Seligman & Maier, 1967) and was derived as a model to explain certain observed behaviors. Overmier and Seligman (1967) found that dogs exposed to electric shocks that were inescapable and unavoidable in one situation, failed to later learn to escape shock in a different situation when escape was possible. It was hypothesized that the dogs learned the outcome was independent of their responses, and this learning produced certain deficits. It was later proposed by Seligman and Maier (1967) that this effect was caused by the uncontrollability of the shocks the dogs received. In other words, the subjects learned the outcome was uncontrollable by their responses.

The concept of controllability refers to the amount of perceived control the subject can exert over the outcome. Simply defined, if there is a behavior a subject can do or refrain from doing that changes the outcome, the subject has control. Furthermore, uncontrollability occurs when a behavior or lack of behavior will not change the outcome, the response and outcome are independent. When this is true, the subject's response cannot control the outcome and therefore the subject does not have control. These results were replicated in many studies using dogs: (See Overmier, 1968; Overmier & Seligman, 1967; Seligman & Groves, 1970; Seligman & Maier, 1967; Seligman, Maier, & Geer,

1968, for related research), cats: (See Masserman, 1943, 1971; Seward & Humphrey, 1967; Zielinski & Soltysik, 1964, for representative experimental studies), fish: (See Behrend & Bitterman, 1963; Bintz, 1971; Frumkin & Brookshire, 1969; Padilla, 1973; Padilla, Padilla, Ketterer, and Giacolone, 1970, for related goldfish data), rats: (See Anderson, Cole, & McVaugh, 1968; De Toledo & Black, 1967; Dinsmoor & Campbell, 1956a, 1956b; Looney & Cohen, 1972; Mullin & Mogenson, 1963; Weiss, Kriekhaus, & Conte, 1968, for representative studies), and human beings: (For related learned helplessness experiments in human beings, see Fosco & Geer, 1971; Glass & Singer, 1972; Hiroto, 1974; Hiroto & Seligman, 1975; Krantz, Glass, & Snyder, 1974; Miller & Seligman, 1975, Note 1; Racinkas, 1971; Rodin, 1975; Roth, 1973; Roth & Bootzin, 1974; Roth & Kubal, 1975; Thornton & Jacobs, 1971.) The studies combined, conclude that the learned helplessness effect seems to be rather general among species that learn.

The learned helplessness effect produces deficits in three areas: motivation; cognition; and affect (Maier & Seligman, 1976). In the studies cited above, the subject's motivation to escape or avoid the aversive stimulus was debilitated once they learned their responses had no control over the outcome. To test the learned helplessness theory, most of these studies employed a triadic design. This design isolates the effects of controllability from the effects of the outcome being controlled. In this design, the first group is given, as its pretreatment, an outcome they can control by their responses. The second group is "yoked" in the respect that their responses do not control or modify the outcome. The

third group is the control group, and receives no pretreatment. Later, all three groups are tested on a new task.

Seligman and Maier (1967) used this design with three groups of eight dogs. The first group, the escape group, was trained in a hammock to turn off electric shock by pressing a panel with their noses. The second or yoked group received identical conditions of the first group, but when the yoked group pressed the panel with their noses, the electric shocks did not terminate. The third, or control group, did not receive shock in the hammock.

Twenty-four hours later, all three groups received training in a shuttle box. The escape group and the control group performed well in the shuttle box. They easily learned to jump the barrier that terminated the electric shock. The yoked group did not do as well. They were significantly slower in responding, and six of the eight subjects failed completely to escape shock. This study shows us that the inability to control the shock is what produced failure, not the shock itself. Also, the subjects' motivation to initiate voluntary responses to control future events was undermined because they learned they had no control over the outcome. Therefore, when a different situation presented itself they assumed it would hold the same outcome.

This assumption is an example of the cognitive deficits learned helplessness produces. Subjects who experience uncontrollability may have difficulty learning that responses have succeeded, when responding is successful. Perception of control may be hampered by the experience of uncontrollability (Maier & Seligman, 1976). The subject learns that

responding and outcomes are independent of each other and it creates a negative cognitive set. This cognitive set slows the learning process even when a subject's responses and outcomes are not independent of each other. The subject's propensity to perceive success is undermined. This phenomena has been shown in helpless dogs, rats, and humans (See Hiroto & Seligman, 1975; Miller & Seligman, 1975, for related experimental studies on humans).

The last deficit to be discussed is the emotional deficit. The emotional deficit is most clearly seen by monitoring physiological changes in subjects. In a human study by Hokanson, DeGood, Forrest, and Brittain (1971), subjects were asked to perform a simple matching task while being shocked. The shocks were individually scheduled so that each subject received a shock approximately every 45 seconds. Subjects in the controllability group were allowed to take as many time-outs as they wished whenever they wanted. The yoked group received the same number of time-outs at the same time as the controllability group. Measures of the subject's blood pressures taken every 30 seconds indicated the yoked group showed consistently higher blood pressures. (See Averill & Rosenn, 1972; Bandler, Madaras, & Bem, 1968; Corah & Boffa, 1970; Elliot, 1969; and Stotland & Blumenthal, 1964, for related studies in humans using a variety of other measures of emotional arousal).

Uncontrollability of aversive events in the laboratory seem to cause three types of disruptions: The motivation to respond is reduced, the propensity to perceive success is undermined, and emotionality is modified. To account for these disruptions, the learned

helplessness theory proposes, simply stated, that when an organism is faced with an outcome that is independent of its responses, he or she sometimes **learns** that the outcome is independent of his or her responses (Maier & Seligman, 1976).

Learning theorists first believed that the most that could be learned was a simple pairing of a response and an outcome, or a response with the absence of an outcome. Then partial reinforcement had to be included, with subjects integrating both pairings. With the increase of pairings, learning had to be broadened to include the probability of an outcome given a response, or absence of a response (Maier & Seligman, 1976). Learning, in which the probability of the outcome is the same whether or not the particular response occurs, is the operation on which this theory is based. Behaviorally, this learning should tend to produce a lack of response initiation to control the outcome; cognitively it should produce a belief in the inefficacy of responding and difficulty in learning that responding succeeds; and emotionally when the outcome is traumatic it might produce emotional disruptions.

The learning process takes place in three steps. First, an organism starts with information about the contingency between response and outcome. Next, the organism must process the information about the contingency and transform it into a cognitive representation of the contingency. This representation is called "the expectation that responding and an outcome are independent." Last, is the behavior that is displayed by the organism. When outcomes are uncontrollable an organism acquires an expectation of response-outcome independence. This expectation therefore reduces the

motivation to control that outcome, interferes with the learning that responding controls the outcome, and produces disruptions in emotionality.

The learned helplessness hypothesis was originally formulated to explain animal behavior. Early studies then attempted to reproduce these same findings in humans. On the surface, this theory seemed to answer all questions. But after closer investigation, the hypothesis was not consistent with all human results. The theory did not explain all boundary conditions that were being displayed. Induced helplessness sometimes involved long-lasting, pervasive difficulties with a loss of self-esteem, and sometimes not. The original theory, when applied to learned helplessness in humans, has two major flaws: (a) It does not distinguish between cases in which outcomes are perceived as uncontrollable for all people and cases in which they are perceived as uncontrollable only for some people, and (b) it does not explain when helplessness is general and when specific, or when chronic and when acute (Abramson, Seligman, and Teasdale, 1978). A reformulation is proposed to resolve the flaws in the original theory. According to the reformulation, when people perceive noncontingency, they attribute their helplessness to a cause. This causal attribution determines the generality and chronicity of the helplessness deficits, as well as later self-esteem (Abramson, Seligman, & Teasdale, 1978).

Hiroto's (1974) study highlights the first problem with the old theory. A subject is assigned to a group that receives uncontrollable noise. The subject is then told that he has the ability to turn off the noise. The noise is actually uncontrollable, so after many unsuccessful attempts the subject may come to believe the problem is unsolvable. The

subject may believe that he/she nor anyone else can control the noise termination.

Alternatively, the subject may believe the problem is solvable, but is convinced that he/she does not possess the ability to control the noise termination, while other subjects possess the ability to control the noise termination.

The reformulated theory makes a distinction between two types of helplessness; universal and personal. Universal helplessness fits the specifications of the old learned helplessness theory. The subject believes the outcome is independent of his or anyone else's responses. For example, if a child had an incurable disease and the child's father spent all his resources fighting this disease, he would eventually give up trying to save his child's life because he believes there is nothing that he nor anyone else can do to fight this disease. The father would then start showing signs of helplessness.

Personal helplessness does not fit as well into the old theory. Suppose a student tries very hard to make good grades. She takes remedial classes, hires tutors, and studies constantly. No matter what she tries, the student fails anyway. This is an example of personal helplessness. The outcome was not altered by any responses that were made by the person. Even though the person did not believe she possessed the abilities to obtain the desired outcome, she believed other people possessed these abilities.

The succession of events in both examples are the same. The person perceived that his acts were noncontingent to the desired outcome. The person then made an attribution, or explanation, for the perceived noncontingency, which in turn led to an expectancy between future acts of the individual and the outcome. Symptoms of helplessness were



finally the consequence of the expectancy that his future responses would be futile in obtaining the desired outcome (Abramson et. al., 1978).

The reformulation proposes that the attribution, or explanation, the person makes for noncontingency between his responses and outcomes in the present, is a determinant of expectations for future noncontingency.

There is another distinction between universal and personal helplessness: the deficit of self-esteem. It has been shown that a major determinant of attitudes toward the self is comparison with others (Clark & Clark, 1939; Festinger, 1954; Morse & Gergen, 1970; Rosenberg, 1965). An analysis of these studies suggests that individuals who believe that desired outcomes are not contingent on responses that are in their repertoire, but are contingent on responses in the repertoires of relevant others, will show lower self-esteem than individuals who believe that desired outcomes are neither contingent on responses in their repertoire nor contingent on responses in the repertoires of others. Even though universal and personal helplessness are distinct in their relation to self-esteem, it is important to mention that motivational and cognitive deficits occur in both universal and personal helplessness.

The second problem with the old theory is that it does not explain the chronicity and generality of deficits associated with helplessness. The first problem with the original theory, the fact that it does not distinguish between cases in which outcomes are perceived as uncontrollable for all people and cases in which they are thought of as uncontrollable only for some people, was resolved by the development of an attributional framework.

This framework is also presented to resolve the old theory's problem that it does not explain the chronicity and generality of deficits associated with helplessness. As stated earlier, once the helpless individual ascertains that certain outcomes and responses are independent, the person makes an attribution about the cause. This attribution effects his or her expectations about future response-outcome relations, and also the chronicity or time course of the deficits, and the generality or range of areas in a person's life that are affected by the deficits. Consider the example: An accountant is fired from his job. There might be two possible attributions the accountant would make: "I'm a loser" and "My boss is a loser". The first attribution may cause the accountant to function poorly in a broad range of situations, affecting the generality of the deficits: he cannot get started on his income tax, fails to look for a new job, becomes impotent, neglects his children, and avoids social gatherings. The time course, or chronicity, of these helplessness effects may be long lasting. The second attribution may cause the helplessness to be situation specific: he does not do his taxes, and fails to look for a new job, but he remains an adequate lover, father, and party goer. The time course of the helplessness effects in this situation may be short-lived (Abramson et al., 1978).

In keeping with the "person as scientist" metaphor that has dominated attributional theorizing (e.g., Heider, 1958; Kelley, 1973; Weiner, 1986), Abramson et al. (1978) proposed in the reformulation that attributions given about the chronicity of a cause affects the stability of deficits, attributions given about the generality of a cause dictates the globality of deficits, and internal attributions influence the degree to which self-esteem

is lost. Thus, dimensions of internality, stability, and globality have become key factors in the attempt to account for boundary conditions of deficits produced by uncontrollable events.

## Appendix B

### Daily Event Log

Directions. For the next 28 days, take time at the end of each day and think about everything you have experienced in the past 24 hours. Decide which event of the day you would consider the most negative and which event you would consider the most positive. These events need not have any significance to anyone else, they need only be important to you. Then, write an objective description of each of the two events. By objective, I mean concise descriptions that give an accurate account of the event and any relevant details. Also, describe the primary cause of the event as you understand it. Some events clearly have more than one cause. Choose the cause you consider the most important to the event. Explain the event and cause in a way that others will understand the context as if they experienced the event themselves. Please, be sure to complete the log entry every day. Hint: It might be helpful in remembering to do your log entry, if you complete it the same time every day.

In addition, you must consider what you believe to be the primary cause of the event and then rate the cause on three 7-point (Likert) scales.

1. The Internality vs. Externality rating asks “Is the cause of the event due something about you or something about other people or circumstances?” For instance, an external cause would be “totally due to other people or circumstances”, and an internal cause would be “totally due to you”.
2. The Stability vs. Instability rating asks about the persistence of the cause. “If in the future (if this event reoccurs), will this cause be present again?” For instance, an unstable cause will “never be present again”, and a stable cause will “always be present.”
3. The Globality vs. Specificity rating asks “Is the cause something that just influences this event, or does it also influence other areas of you life?” For instance, a specific cause influences “just this particular event”, and a global cause influences “all situations in your life”.

These questions are listed only to aid you in your rating. What one person considers internal, stable, and global, another person might consider external, unstable, and specific. For this reason, there are no correct or incorrect responses.

## EXERCISE IN IMAGINATION

Name \_\_\_\_\_  
Phone \_\_\_\_\_

Sex \_\_\_\_\_  
SS# \_\_\_\_\_

### PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY

An important personal asset is imagination. This test gives you an opportunity to use your imagination, to show you can create ideas and situations by yourself. In other words, instead of presenting you with answers already made up, from which you have to pick one, it gives you the chance to show how you can think things on your own.

On the following pages, you are to make up and write out a brief, imaginative story for each of the six pictures that will be presented on the screen. You will have five minutes for each story. There is one page for each story ( in any case, please do not write more than about 150 words per story).

To help you cover all the elements of a story plot in the time allowed, you will find these questions repeated at the top of each page:

1. What is happening? Who are the people?
2. What has led up to this situation? That is, what has happened in the past?
3. What is being thought: What is wanted? By whom?
4. What will happen? What will be done?

Please remember that the questions are only guides for your thinking: you need not answer each specifically. That is, your story should be continuous and not just a lot of answers to these questions.

There are no "right" or "wrong" stories. In fact, any kind of story is quite all right. You have a chance to show how quickly you can imagine and write on your own.

Try to make your stories interesting and dramatic. Show that you have an understanding of people and can make up stories about human situations. Don't just describe the pictures, but write stories about them.

Each picture will be projected onto the screen for 20 seconds, then turn the page and write the story suggested to you by the picture. After 5 minutes, another picture will be projected onto the screen. Turn the page, and write the story suggested to you by the picture and so on for all six pictures. I will announce that it is time to move on before I show the next picture.

PLEASE PRINT OR WRITE YOUR STORIES CLEARLY