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Study of the Velten Mood Induction Procedure and the measurement of mood

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A STUDY OF THE VELTEN MOOD INDUCTION PROCEDURE AND THE MEASUREMENT OF MOOD

by

Mark David Lessard

B. A., Amherst College, 1989

Presented in partial fulfillment of the requirements for the degree of
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The Velten Mood Induction Procedure consists of sixty self-referent statements for each of three mood conditions—elation, neutral, and depression. The statements are designed such that the elation set should elate the subject, the depression should depress subject mood, and the neutral set should have no effect on subject mood. Reviews of the VMIP indicate that its effectiveness is unclear. Some researchers argue that its effects are the result of demand characteristics and some argue it does not effect males. Which measures best detect mood change is also a subject of controversy.

480 introduction to psychology students served as subjects in an experiment to investigate the effectiveness of the Velten Mood Induction Procedure (VMIP) and to compare four different mood measures—writing speed, counting speed, the Positive Affect Negative Affect Scale (PANAS), and the Multiple Affective Adjective Checklist (MAACL).

Subjects were individually exposed to the VMIP and one mood measure. Results indicated that the VMIP was successful at producing change from pre to post on all measures. Of the four mood measures, the PANAS was most sensitive to mood change. The PANAS was the only measure to show a sex difference. This difference was an additional effect. That is, it indicated a greater change in women in addition to an already significant change for men. This suggests that although there may be a differential effect for sex, the VMIP is effective in producing mood change in men. A review of mood research and implications for future research is discussed.
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CHAPTER ONE

INTRODUCTION

Whether the change is from anxiety to calm or from depression to happiness, the goal of many semantic psychotherapies involves emotional modification. More specifically, it involves helping a client to construct a positive perspective from a negative one. In order to better understand and more effectively facilitate this therapeutic process, researchers investigate laboratory induced mood and mood induction procedures (MIPs).

In this chapter, the relationship between mood and emotion; the link between induced mood, depression and happiness; and the use of MIPs in determining the connection between mood and behavior will be presented. The Velten Mood Induction Procedure (VMIP) will be described, the theory behind its efficacy discussed, and the confusion around the measurement of the VMIP explored. Several different measurements of mood are presented. Possible vulnerabilities of the VMIP to demand characteristics and sex differences are noted. Finally, the goals and experimental hypotheses of this study are elaborated.

Mood and Emotion

There are many possible subareas of induced mood research. Some researchers attempt to demonstrate that laboratory induced mood is analogous to emotional states
such as depression and elation. One theory holds that there is a mood-emotion continuum (Velten, 1967, p. 16). In general, the difference between mood and emotion is quantitative; moods are less intense and not as enduring as emotions. At a certain point along the continuum, the words mood and emotion can be used interchangeably.

There is experimental support for the hypothesis that induced moods are analogous to emotional states. For example, one way to diagnose clinical depression is to have an interview with the client and have him report his feelings. It has been found that subjects going through a depressing mood induction describe their immediate state similar to the description clinically depressed people report (Clark, 1983).

With the Multiple Affective Adjective Checklist (MAACL) developed by Zuckerman et al (1964) it is possible to distinguish between clinically depressed people and others by their responses to this scale. It has been found that subjects undergoing negative mood induction respond to the MAACL like clinically depressed clients do. There is not a clinical sample of consistently happy people to compare with subjects who have experienced an elating mood induction; however, it has been shown that elated subjects respond significantly differently from depression induced subjects who typically respond like clinically depressed populations.

In addition to the similarity of reported affect between subjects who have experienced a laboratory induced mood and clients who are clinically depressed, there are behavioral correlates. Clinical depression is frequently associated with psychomotor slowing. Using a counting speed test, Teasdale, Fogarty and Williams (1980) found that subjects took longer to count than elated and neutral subjects. Hale and Strickland (1976) found that subjects in the induced depressed condition wrote more slowly and used less graphic expression than did neutrals and elated subjects. Michael Natale and Ray Bolan (1980) found that negatively induced subjects tended to use their hands less when speaking and were more likely to have a head-down posture. In contrast, elated subjects show increases in psychomotor activity which is argued to correlate with happiness.

**Induced Mood Research and Determinants of Depression**

Because mood induction procedures produce change in reported affect on a variety of scales, change in behavioral activity on numerous measures, and these changes correspond to clinical states, it is argued that induced mood is comparable to clinical depression and happiness (Clark, 1983; Goodwin & Williams, 1982). Further, since
there are techniques to produce mood change in the laboratory and it does not involve much subject risk, it seems to be an ideal method for studying the determinants, nature, and treatment of clinical depression.

Once one is willing to make the assumption that induced negative mood is analogous to depression, it follows that discovering which factors induce negative mood offers clues to the causes of depression. Conversely, by determining which factors lead to elation, it is possible to study how to treat depression. Frost et al. (1979) found that subjects who were told to feel certain somatic suggestions such as "I feel weak" as they read them, reported feeling depressed. They suggest a link between body perception and depression. Cash et al. (1986) found that subjects who possessed irrational beliefs as measured by Albert Ellis' Irrational Belief Test were particularly susceptible to negative mood induction. This provided support for Ellis' theory of irrational thinking and depression.

Coleman (1975) and Wilson and Krane (1980) found that a procedure requiring subjects to read and attempt to feel statements linked to their self-esteem was a successful mood induction procedure. This suggests a link between self-esteem and mood. Natale (1978) found that after a MIP, subjects who became elated reported an increased sense of internality; subjects who became depressed reported an
increase sense of externality. This provides evidence for a relationship between locus of control and depression.

**Mood Induction Research and Determinants of Behavior**

There are areas of mood induction research that do not deal directly with isolating the determinants of depression or treating depression. Sometimes MIPs are used to determine the effects of mood on a variety of activities. It is practically impossible to gather samples of people already in a needed mood so an effective MIP is quite useful. From any sample, an effective MIP can produce discrete moods and the effect of mood on a measure of interest can be observed. For example, Hale and Strickland (1975) found that mood affected social behaviors. Specifically, after participating in a MIP, elated subjects were more likely to wish to engage in active social behaviors than were depressed subjects. Bollenbach and Madigan (1982) and Gouaux and Gouaux (1971) found that mood can alter social perceptions such that depression induced subjects are more likely to think future social interactions will be poor. Also, they are more likely to remember negative events in past social situations.

A critical research area that consistently utilizes MIPs is the study of eating behavior (Smith & Jeffrey, 1990). For years, it was hypothesized that eating behavior was linked with mood. With the advent of MIPs, systematic
research of this hypothesis has been possible. Frequently, the experiment is designed such that a group of subjects experience a depressing mood induction and subsequent eating behaviors are observed and compared to controls. It has been found by Frost et al. (1982) and Ruderman (1985) that restrained eaters, people whose eating patterns are characterized by chronic dieting, will over-eat after experiencing a negative MIP. This research seems to dispel a myth that all people eat more when depressed; it seems only restrained eaters respond this way. This research will help in the future treatment of eating disorders.

The Velten Mood Induction Procedure

It seems clear that the results of mood induction research can provide psychologists with important information regarding the effects and determinants of emotion. Because of the potential wealth of information that might be obtained, many people have become involved in this area and have attempted to develop effective MIPs. Martin (1990) describes and compares sixteen different classes of mood induction procedures. These procedures include reading self-referent statements, listening to music, watching films, hypnotic suggestion, visual imagery, autobiographical recall, and public speaking.

The most widely used and studied technique for experimental mood change is a set of self-referent
statements developed by Emmet Velten (1968). The Velten Mood Induction Procedure (VMIP) consists of three sets of sixty statements: one set is designed to produce a depressed condition, one to produce elation, and a neutral set intended to have no effect on subject mood. Each set of statements are typed onto cards and the subjects are required to read the statements and to try to feel the suggested message. Examples of depressed statements include "I'm discouraged and unhappy about myself" and "I feel worn out, my health might not be as good as it's supposed to be." The elation condition includes, "If your attitude is good, then things are good, and my attitude is good" and "This is great, I really do feel good, I am elated about things." Examples from the neutral condition include "This book or any part thereof must not be reproduced in any form" and "Utah is the Beehive State."

Theory Behind the Velten Mood Induction Procedure

Emmet Velten's ideas were influenced by the work of Albert Ellis. Velten agreed with Ellis' concept that the constructions or interpretations people place upon events will determine their affective responses (Velten, 1968). That is, if a person views a situation as having a negative impact upon them, they will become depressed; if the person perceives a situation as positive, they will become happier.
Velten supported the belief that it is possible to alter a person's perceptions and cognitions through hypnosis. He also argued that hypnosis was simply a special instance of normal suggestion that takes place during ordinary interpersonal interactions (Velten, 1967, page 7). People often modify their behavior and perceptions in response to the explicit or implicit cues or suggestions of others (Velten, 1967, page 13). Velten argued that this process of change could also take place within an individual through the use of "autosuggestion". That is, one can originate and implement one's own cues for change. By repeating a suggestion to oneself, a person could shape their own expectations of their environment and, thus, their evaluation of it. Therefore, the theoretical basis for the VMIP springs from the belief that there is a connection between cognition and mood and that through autosuggestion one can create a cognitive perspective that will lead to a specific mood. Specifically for the VMIP, it was hypothesized that if a subject reads and attempts to feel a set of suggestions that induce a depressing cognitive set, depression will be induced. Similarly, if a subject reads and feels a set of suggestions that induce an elating cognitive set, elation will be induced.

The Effectiveness of the Velten Mood Induction Procedure
In their research, Larsen and Sinnet (1991) recovered 341 publications involving the use of the Velten Mood Induction Procedure. Nevertheless, despite its wide use, the effectiveness of the VMIP is unclear (Kenealy, 1986). Kenealy (1986) notes that only 13% of all studies using the VMIP produce changes where the elation, neutral, and depressed conditions are all significantly different from one another. Clark (1983) claims that between one-third and one-half of all subjects show little to no change in response to the VMIP. In some cases, the elation group will experience change significantly different from the neutral group, but the depression group will not (Hale & Strickland, 1976). More commonly, experimenters find successful induction of the depression condition but not the elation condition (Smith & Jeffery, 1990). Nevertheless, many researchers have replicated or expanded on Velten's work and claim the procedure produced significant mood changes (Clark, 1983).

Chartier and Ranieri (1989) divided subjects into three groups that received either the elating, neutral, or depressing mood induction. After the induction, a self-report measure was repeated six times at six-minute intervals. This design enabled the experimenters to measure the effects of the VMIP and observe the duration of those effects. Results indicated that the VMIP was successful in producing a depressed mood, an elated mood, and maintaining
the initial subject mood (neutral). Concerning the duration of the effects, the depressed group's effects lasted between 6-12 minutes after induction. Although the first post-measure in the elation condition was significantly different from the pre-measure, the effects generally dissipated by the next administration of the dependent variable. In sum, Chartier and Ranieri's findings suggest that the VMIP is effective at producing significant mood changes, the effects of both conditions are brief, and the effects of the depressed condition are more durable than the elation condition. This finding is particularly important because it demonstrates that a lapse between induction and measurement can account for non-significant findings, particularly in the case of the elation condition.

A major obstacle to clearly determining the effectiveness of the VMIP is the large variety of mood assessments used. No single measure has been adopted as a general measure of mood change (Martin, 1990). A clear comparison of the VMIP's effectiveness among experiments is difficult because different types of dependent measures are used (Kenealy, 1986; Larsen & Sinnet, 1991).

Measurement of Mood

Self-reports and behavioral measures are two techniques used to measure mood. More studies obtain significant results using self-reports than direct behavioral measures
It is possible that self-reports are more susceptible than more direct behavioral assessments to the role that demand characteristics may play in producing results (Larsen & Sinnet, 1991). It is also possible that self-reports are simply more accurate tools for mood assessment. More research is necessary to determine the relative merits of these assessments.

Self-reports require subjects to answer a series of questions that, as a unit, will provide a score that the experimenter can interpret as an indication of mood level. The most commonly used mood assessment device is the Multiple Affect Adjective Check List (MAACL) developed by Zuckerman, Lubin, Vogel, and Valerius (1964). The scale consists of three scales to measure depression, anxiety and hostility. There are 131 adjectives; 20 (active, alive, healthy...) are scored as a minus if checked, 20 (alone, blue, tormented...) are scored as a plus if checked. The 91 remaining adjectives are not used in the scoring. Thus, it is possible to score within a range of 20 to -20. A score towards the positive suggests a depressive state and a minus score suggests the absence of depression (used to measure elation in VMIP).

The MAACL has demonstrated a reliability between .72 and .92 in a number of studies (Zuckerman, 1960; Zuckerman, Lubin, Vogel & Valerius, 1964). Validity has been verified
by finding significant relationships between MAACL scores and psychiatric interviews (Zuckerman, 1960) and MMPI profiles (Zuckerman, Lubin & Robins, 1965).

The Visual Analogue Mood Scale (VAMS) is another common form of self-report measure (Albersnagel, 1988; Luria, 1975; Williams, 1980). Typically the subject is presented with opposing adjectives such as tired and energetic. These adjectives are presented on a paper at two extremes and the subject is asked to draw a line between the two adjectives that indicates his present degree of that particular state. A score is computed by measuring the mark from one extreme and comparing the distance across mood conditions.

Using a psychiatric population as subjects, Luria (1975) demonstrated the validity of the VAMS in several ways: concurrent validity, clinical validity, and behavioral validity. Concurrent validity was demonstrated by showing that a significant correlation existed between scores of the VAMS and the results of the Clyde Mood Scale and the Self-Rating Depression Scale. Concerning behavioral validity, it was shown that the VAMS scores of patients who exhibited dysphoric behaviors significantly differed from patients exhibiting euphoric behaviors. Finally, there was a significant correlation between mood as assessed by the VAMS and the clinical condition of the patients. Stability coefficients were significant. The reliabilities were higher when the time between test and retest was less. This
finding seems to demonstrate the sensitivity of the VAMS to measure mood changes.

The Positive Affect Negative Affect Scale (PANAS) is a relatively recent development in mood induction measurement. It was developed by Watson, Clark, and Tellegen (1988). The scale consists of a number of words that describe different feelings and emotions (interested, irritable, afraid...). The subject is asked to rate on a Likert scale of 1 to 5 (ranging from not at all to extremely) to what extent they feel that way at a specific moment assigned by the experimenter.

Watson, Clark, and Tellegen (1988) report the results of a number of studies that suggest that the PANAS is a reliable and valid mood assessment tool. As evidence, they show that the correlation between the Positive Affect portion and the Negative Affect part of the scale was invariably low (-.12 to -.23). The authors also show that the test-retest stability will increase depending on the time frame (to what extent do you feel that way right now, have you felt this way during the past week, felt this way the past year...) used by the experimenter. The variability of results when using shorter time frames suggests the instrument is sensitive to mood fluctuation, whereas it will exhibit trait like stability for long term instructions. The scores of the PANAS were significantly correlated with related results from a number of scales including the
Hopkins Symptom Checklist, the Beck Depression Inventory, and the State-Trait Anxiety Inventory State Anxiety Scale.

Two of the most frequently used behavioral assessments are counting speed and writing speed. The specifics such as the task to be written or counted or the amount of time changes, but in general, a person is given a counting or writing task and is timed. It has been observed that depressed people experience psychomotor slowing (Natale & Bolan, 1980). It is argued that if induced depression is similar to naturally occurring depression there should be a post-induction reduction in psychomotor activities. It has been found that in some instances depressed subjects count (Clark, 1983; Slyker and McNally, 1991; Teasdale, Fogarty & Williams, 1980) and write more slowly than non-depressed or elated subjects (Aderman, 1972; Clark, 1983; Hale & Strickland, 1976; Natale, 1978; Natale & Bolan, 1980). Concerning validity, in some studies the results of counting and writing speed has correlated with other measurements of mood (Hale & Strickland, 1976; Kenealy, 1986; Teasdale, Fogarty & Williams, 1980).

The Velten Mood Induction Procedure and Demand Characteristics

Aside from the difficulties of measuring mood and conclusively determining the effectiveness of the VMIP, there is a problem determining what exactly is responsible
for any change in mood that might occur. Some researchers argue that even though significant mood change might be achieved using the VMIP it is not because of the procedure itself. The changes are due to certain demand characteristics (cues that reveal the experimental hypothesis) present in the directions (Lewis & Harder, 1988). The argument is that subjects discover the experimental hypothesis and perform in a manner that will bring about an outcome they believe the experimenter wants. It is also possible that a pre-test can affect a subject’s expectations and performance in an experiment (Nagata and Trierweiler, 1988). A subject might fill out a pre-test mood report and become alerted to the possibility that mood is what is being observed and this awareness might contribute to some effect due to demand characteristics.

Some argue that it is the instructions that subjects receive rather than the VMIP that produce mood changes. Buchwald, Strack and Coyne (1981) conducted an experiment consisting of five groups: one group for each of the elation (E), depression (D), and neutral conditions of the VMIP, one group that was instructed to act elated (ED), and one group that was instructed to act depressed (DD). Subjects then completed a decision time, writing speed, word association task, and the MAACL. They found no significant difference between E and ED or D and DD on any of the dependent measures. Their conclusion was that the demand
characteristics were all that was necessary to produce mood changes equivalent to the VMIP.

Slyker and McNally (1991) conducted a similar study. They had four groups of subjects: one was simply instructed to get in an elated mood, the second was instructed to get in a depressed mood, the third group was told to get in an elated mood and was then run through the elation condition of the VMIP, and the fourth group of subjects were instructed to get into a depressed mood and then engaged in the depression version of the VMIP. Each group demonstrated significant changes as measured by the VAMS, MAACL, count times, and immediate auditory memory. The instructions alone groups did not significantly differ from the instruction and VMIP groups. Thus, Slyker and McNally concluded that the VMIP did not enhance the mood change that came about from instructions alone.

Using a meta-analytic approach, Larsen and Sinnet (1991) found that the VMIP is more effective when the dependent measures are self-reports; that is, measures more susceptible to subject compliance. They also found that the VMIP was more effective when an honest cover story was used. When subjects were explicitly told that mood change was expected there was more measurable mood change than in experiments that did not reveal to subjects that a mood change was expected. Larsen and Sinnet (1991) argue that these findings provide evidence for an additional effect
attributable to demand characteristics. There research, as a whole, indicated that the procedure had some inherent effects and that demand characteristics inflated what were already significant mood changes.

Polivy and Doyle (1980) also concluded that the Velten Mood Induction Procedure has some effect that is not attributable to demand characteristics. In their study they included two counter-demand groups. In these conditions, subjects were told to feel elated but given the depression condition of the VMIP. Similarly, a set of subjects were instructed to feel depressed but given the elation condition of the VMIP. Their findings indicated that there was about equal chance of reporting either mood at the end of the procedure. Thus, it is argued, that, at least in some cases, the effects of the procedure were more influential than the effects of the instructions.

Other researchers claim that the effects of the Velten Mood Induction Procedure are not attributable to demand effects. Riskind and Rholes (1985) claim that one reason that experiments studying the effects of demand characteristics fail to show differences between instructions and VMIP groups is that the instruction groups are told how to manipulate the dependent measures. They found that when asked to recall memories congruent with their affect, VMIP groups were much more successful than instruction alone groups. Their conclusion is that the VMIP
does produce mood change, that instruction groups can only act in a changed mood and that more subtle dependent measures will distinguish between the two groups.

Berkowitz and Troccoli (1986) also argue that there are a number of Velten-induced reactions that are too subtle to have been deliberately faked. They also disagree with many of the assumptions of proponents for the effect of demand characteristics. Their review of the literature found little evidence to support the notions that subjects search for cues to reveal the study's actual purpose, that they are highly sophisticated in making inferences based on the cues that they do get or are eager to confirm what they perceive to be the experimenter's hypothesis.

The Velten Mood Induction Procedure and Sex Differences

A second area of criticism to the VMIP is the variable effectiveness of the procedure depending on sex of the subject. Some experimenters claim no gender differences (Buchwald, Strack, & Coyne, 1981; Clark, 1983). Others find significant differences between male and female responses to the VMIP (Albersnagel, 1988; Lewis and Harder, 1988). In fact, Velten, himself, recognized the variable effect of his mood induction procedure on men causing him to limit his subjects to females (Gouaux & Gouaux, 1971; Lewis & Harder, 1988). If the effects are gender specific one must consider
its usefulness in studies attempting to generalize findings to both sexes.

Goals of the Present Study

This author has tried to present some of the possible uses and confusion concerning the Velten Mood Induction Procedure. A procedure that can predictably change mood can be used to study depression and the effects of mood on behavior. However, a true understanding of the VMIP's effectiveness remains unclear, the question of appropriate means of measuring mood, the role of demand characteristics, and potential sex differences in reactions all contribute to create a cloudy understanding of its effect.

The purpose of this research is to assess the effectiveness of the VMIP, by using a variety of self-report and behavioral measures. This will be done in order to compare the sensitivity of the various assessments to the VMIP. Standardizing the various sensitivity of the instruments will enable comparisons to be made between studies using different dependent measures. This will be particularly important in the case of the PANAS where little, if any, research in conjunction with the VMIP has been done. The final goal will be to study the interaction between sex, VMIP, and type of assessment used.
Experimental Hypotheses

It is hypothesized that the VMIP will be effective in producing trends toward significance on all measures. It is unlikely, however, there will be a significant difference between the elated, neutral, and depression condition on all of the measures. The self-report measures will show more change than the direct behavioral measures. There will be differences among how the measures assess the extent of mood change. Finally, the procedure will be more effective with women, particularly as measured by the self-report assessments.

Two additional experimental questions will also be assessed. In using college students as subjects, the problem of experimental procedures being discussed and subject contamination occurring must be considered. Since it will take many weeks to accumulate the data a self-report measure (Appendix I) will be used to assess the rate of contamination.

Informal observations during pilot work seemed to indicate that subjects varied in the amount of effort that they engaged in the task. The score on a self-reported effort scale (Appendix I) will be used to determine the effect of subject effort on the VMIP's effectiveness.
CHAPTER TWO

METHOD

Subjects:

240 male and 240 female subjects from the introductory psychology pool who were offered course credit for their participation in the study. These subjects were told they are participating in a "A Study in Mood."

Apparatus:

Each subject was tested individually. The administration took place in several rooms on campus that allowed for privacy and had a suitable environment (ie table and chairs).

The materials needed for the mood induction was the Velten Mood Induction Procedure (VMIP, 6 copies of each set). One set of sixty statements for each of the conditions: depressed (Appendix A), neutral (Appendix B) and elated (Appendix C).

Assessment materials included the following: The Visual Analogue Mood Scale (VAMS, 480 copies, Appendix D), The Multiple Affective Adjective Checklist (MAACL, 240 copies, Appendix E), The Positive Affect, Negative Affect Scale (PANAS 240 copies, Appendix F), Prior Knowledge Checklist (Appendix I, 480 copies), some pencils, and paper. For
complete directions on scoring the dependent measures see Appendix J.

Eleven undergraduate assistants assisted in the data collection and processing. They were given ample training to insure that the procedure was standardized and the debriefing was done in an effective and responsible manner. The assistants were blind to the experimental hypotheses.

Procedure (See Diagram 1):

There were four measurement conditions (MAACL, PANAS, writing speed, counting speed) X three mood induction conditions (depressed, elated, neutral) X two genders (males, females). This made a total of twenty-four groups; each group contains twenty subjects making a total of 480 subjects.

Subjects were obtained through the use of the sign-up sheets that allow volunteers from the introduction to psychology classes to earn experimental credit. Subjects were assigned to condition based on the order they signed. The student assistants ran the subjects in a unique order that rotated the conditions. In this way, all conditions were collected at similar times and each assistant executed each condition of the experiment. These precautions were exercised in order to diminish the possible effects of experimenter and historical biases.
At the onset of the experiment, the assistant oriented the subject to their role in the study (Appendix H). The assistant then administered the "Prior-Knowledge Checklist" (Appendix I) to assess the amount of knowledge the subject might have about the study. This was done in order to note the possible course of subject contamination. Following the checklist, all subjects were given the VAMS. This is a standard form with directions on it. It is unlikely that this acted as a demand characteristic. There is nothing on the form that would inform subjects of anything other than mood was being studied. Given that subjects were aware that this was "A Study in Mood", it is unlikely that the VAMS provided any additional cues as to the nature of the experimental goals. Therefore, the VAMS was used to measure the equivalency of the groups on mood level prior to mood induction.

Dependent on condition, the subjects responded to one of the other assessment devices. Subjects responding to the MAACL or the PANAS were given the form, asked to read the directions as the assistant read them aloud, then fill it out. Subjects in the counting speed condition were asked to count backwards from 100 by ones; this proceeded for 30 seconds after which the assistant recorded the last number stated within the time frame. Subjects in the writing speed condition were asked to write numbers starting from 100 and proceeding backwards for one minute. The assistant kept the
### DIAGRAM ONE: METHOD

<table>
<thead>
<tr>
<th>STANDARD MEASURE</th>
<th>PRE-TEST</th>
<th>VMIP</th>
<th>POST-TEST</th>
</tr>
</thead>
<tbody>
<tr>
<td>VAMS</td>
<td>(a)WRITING (b)COUNTING (c)PANAS (d)MAACL</td>
<td>DEPRESSION</td>
<td>(a)WRITING (b)COUNTING (c)PANAS (d)MAACL</td>
</tr>
<tr>
<td>VAMS</td>
<td>(e)WRITING (f)COUNTING (g)PANAS (h)MAACL</td>
<td>ELATION</td>
<td>(e)WRITING (f)COUNTING (g)PANAS (h)MAACL</td>
</tr>
<tr>
<td>VAMS</td>
<td>(i)WRITING (j)COUNTING (k)PANAS (l)MAACL</td>
<td>NEUTRAL</td>
<td>(i)WRITING (j)COUNTING (k)PANAS (l)MAACL</td>
</tr>
</tbody>
</table>

Subjects are only exposed to one measure and will always receive the same post-test and pre-test. For example, condition (a) will involve a writing pre-test the depression mood induction and the writing post-test. paper and noted the last number recorded.
Directions for the writing speed and counting speed measures (Appendix G) were read aloud by the assistant.

The subjects were then placed in either the elated, neutral, or depressed condition (Appendix G) of the VMIP. The directions and materials were read by the subjects individually at their own pace and an assistant was present to respond to questions. The statements of the VMIP were each typed on 3x5 cards. Each statement was presented to the subject for twenty seconds. Upon completion of the VMIP, the dependent measure was readministered. Since there was a random assignment of subjects to conditions, it is assumed that any effect due to practice was spread evenly across conditions.

The choice to test the effects of one assessment device at a time was influenced by studies that suggest the effects of the VMIP quickly dissipate (Chartier & Ranieri, 1989; Isen & Gorgoglione, 1983). Although this method required more subjects, the advantage of enabling the experimenter to most clearly determine the VMIP’s effect on a given assessment device was worth the exchange.

After the administration of the post-measure, the assistant asked a question (APPENDIX I) concerning the subject’s degree of involvement. This question was included to assess the relationship between subjects’ reported involvement and experimental results.
Finally, subjects were debriefed (APPENDIX H) without revealing any of the experimental hypotheses. The effects of the VMIP did not produce a profound adverse reaction in any subjects. Nonetheless, subjects in the depression condition were monitored and, when they chose, they utilized the elated mood induction to assuage any depressive effects that may have lingered.
CHAPTER THREE

RESULTS

Check For Initial Mood Equivalency

The Visual Analogue Mood Scale was used as a standard to determine the degree of subjects' mood equivalency prior to exposure to the pre-test and the mood induction procedure. A 3X2 (Treatment X SEX) factorial ANOVA was performed to determine whether subject groups have similar distributions on the VAMS at the onset of the experiment. Results indicated that there were not significant mood differences between subgroups prior to manipulation (See Table 1). The mean for the total population was 19.16; the mean for males was 18.93 and the mean for females was 19.40. For a complete list of group means, consult Appendix K.

| TABLE 1 |
|------------|---------------------------------|--------|------|
| 3X2 TREATMENT BY SEX FACTORIAL ANOVA | SUM OF SQUARES | F   | SIGNIFICANCE |
| MOOD      | 26.15                          | .166  | .847 |
| SEX       | 26.13                          | .332  | .565 |
| MOOD X SEX| 125.07                         | .795  | .452 |
Dependent Measures

To determine the effects of the VMIP on the mood measures (writing speed, counting speed, PANAS, MAACL), four complex repeated measure ANOVA analyses were performed (See Appendix L). This was a between-within analysis where treatment was the between factor and the pre-post mood measurement was the within factor. All four measures had significant pre-post by mood induction differences (See Table 2). Writing yielded an F-ratio of 16.21 (p<.001); counting yielded an F-ratio of 12.16 (p<.001); the PANAS yielded an F-ratio of 75.99 (p<.001); and the MAACL yielded an F-ratio of 51.87 (p<.001). No three-way mood by sex by pre-post interactions were significant. The means and standard deviations for each measure by mood and gender are summarized in Table 3.

<table>
<thead>
<tr>
<th>MEASURE</th>
<th>SUM OF SQUARES</th>
<th>F</th>
<th>SIGNIFICANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>WRITING</td>
<td>418.51</td>
<td>16.21</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>COUNTING</td>
<td>930.23</td>
<td>25.45</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>PANAS</td>
<td>5739.36</td>
<td>75.99</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>MAACL</td>
<td>2589.78</td>
<td>51.87</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>
Table 3
MEANS AND STANDARD DEVIATIONS FOR WRITING, COUNTING, PANAS, AND MAACL

<table>
<thead>
<tr>
<th></th>
<th>PRE</th>
<th></th>
<th>Post</th>
<th></th>
<th>Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEAN</td>
<td>SD</td>
<td>MEAN</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td><strong>WRITING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DEPRESSION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>52.700</td>
<td>10.912</td>
<td>53.100</td>
<td>12.924</td>
<td>0.40</td>
</tr>
<tr>
<td>FEMALES</td>
<td>47.800</td>
<td>12.931</td>
<td>50.250</td>
<td>10.146</td>
<td>2.45</td>
</tr>
<tr>
<td><strong>ELATION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>56.450</td>
<td>11.297</td>
<td>49.500</td>
<td>11.642</td>
<td>-6.95</td>
</tr>
<tr>
<td>FEMALES</td>
<td>50.600</td>
<td>10.792</td>
<td>47.850</td>
<td>11.057</td>
<td>-2.75</td>
</tr>
<tr>
<td><strong>NEUTRAL:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>51.600</td>
<td>5.762</td>
<td>51.250</td>
<td>5.684</td>
<td>-0.35</td>
</tr>
<tr>
<td>FEMALES</td>
<td>54.600</td>
<td>11.057</td>
<td>54.250</td>
<td>11.675</td>
<td>-0.35</td>
</tr>
</tbody>
</table>

*Note: Lower scores indicate faster writing.*

<table>
<thead>
<tr>
<th></th>
<th>PRE</th>
<th></th>
<th>Post</th>
<th></th>
<th>Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEAN</td>
<td>SD</td>
<td>MEAN</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td><strong>COUNTING</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DEPRESSION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>62.650</td>
<td>9.069</td>
<td>67.000</td>
<td>7.448</td>
<td>4.35</td>
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<tr>
<td>FEMALES</td>
<td>63.350</td>
<td>6.385</td>
<td>66.000</td>
<td>6.829</td>
<td>2.65</td>
</tr>
<tr>
<td><strong>ELATION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>61.950</td>
<td>7.626</td>
<td>55.300</td>
<td>9.889</td>
<td>-6.65</td>
</tr>
<tr>
<td>FEMALES</td>
<td>64.250</td>
<td>8.753</td>
<td>59.450</td>
<td>10.075</td>
<td>-4.80</td>
</tr>
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<td><strong>NEUTRAL:</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>61.850</td>
<td>9.566</td>
<td>57.500</td>
<td>13.161</td>
<td>-4.35</td>
</tr>
<tr>
<td>FEMALES</td>
<td>64.000</td>
<td>5.496</td>
<td>61.250</td>
<td>6.866</td>
<td>-2.75</td>
</tr>
</tbody>
</table>

*Note: Lower scores indicate faster counting.*
Table 3: continued

### PANAS

<table>
<thead>
<tr>
<th></th>
<th>PRE</th>
<th></th>
<th>Post</th>
<th></th>
<th>Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEAN</td>
<td>SD</td>
<td>MEAN</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td><strong>DEPRESSION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEMALES</td>
<td>-14.300</td>
<td>7.197</td>
<td>2.800</td>
<td>11.583</td>
<td>17.10</td>
</tr>
<tr>
<td><strong>ELATION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NEUTRAL:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEMALES</td>
<td>-17.000</td>
<td>7.954</td>
<td>-10.950</td>
<td>7.917</td>
<td>6.05</td>
</tr>
</tbody>
</table>

Note: Lower scores indicate greater elation.

### MAACL

<table>
<thead>
<tr>
<th></th>
<th>PRE</th>
<th></th>
<th>Post</th>
<th></th>
<th>Diff</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>MEAN</td>
<td>SD</td>
<td>MEAN</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td><strong>DEPRESSION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>-7.000</td>
<td>6.035</td>
<td>4.650</td>
<td>7.332</td>
<td>11.65</td>
</tr>
<tr>
<td>FEMALES</td>
<td>-7.400</td>
<td>6.644</td>
<td>6.750</td>
<td>9.089</td>
<td>14.15</td>
</tr>
<tr>
<td><strong>ELATION:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>-6.000</td>
<td>7.546</td>
<td>-7.650</td>
<td>6.683</td>
<td>-1.65</td>
</tr>
<tr>
<td>FEMALES</td>
<td>-6.450</td>
<td>8.211</td>
<td>-10.450</td>
<td>6.962</td>
<td>-4.00</td>
</tr>
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<td><strong>NEUTRAL:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MALES</td>
<td>-8.950</td>
<td>7.126</td>
<td>-6.200</td>
<td>7.845</td>
<td>2.75</td>
</tr>
<tr>
<td>FEMALES</td>
<td>-6.650</td>
<td>7.329</td>
<td>-5.025</td>
<td>7.188</td>
<td>1.63</td>
</tr>
</tbody>
</table>

Note: Lower scores indicate greater elation.
Tukey's HSD pairwise comparisons were used to compare the interaction cell means for each measure to determine which means significantly differed from each other. For writing speed (see Table 4), there was a significant difference between the post means of the elation and depression condition (difference = 4.07) and the elation and neutral condition (difference = 3.00). Only the elation condition differed significantly from pre to post (difference = 2.85).

<table>
<thead>
<tr>
<th>MOOD</th>
<th>PRE-MEAN</th>
<th>POST-MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPRESSION</td>
<td>50.25a</td>
<td>51.68ab</td>
</tr>
<tr>
<td>ELATION</td>
<td>53.53b</td>
<td>48.68c</td>
</tr>
<tr>
<td>NEUTRAL</td>
<td>53.10b</td>
<td>52.75ab</td>
</tr>
</tbody>
</table>

*NOTE: t critical = 4.1 (6 means, 114df, 40/cell); means that do not share a common letter differ significantly. Lower scores indicate faster writing.

For counting speed (see Table 5), there was a significant difference between the post means of elation and depression (difference = 9.12) and depression and neutral conditions (difference = 7.12). All conditions, including neutral, changed significantly from pre to post (elation difference = 5.72, depression difference = 3.5, and neutral difference = 3.55). Had the neutral condition actually produced no effect the elation and neutral post scores might
have been significantly different. The difference between elation post and neutral pre scores was significantly different (difference=5.55).

**TABLE 5**

<table>
<thead>
<tr>
<th>MOOD</th>
<th>PRE-MEAN</th>
<th>POST-MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPRESSION</td>
<td>63.00a</td>
<td>66.50b</td>
</tr>
<tr>
<td>ELATION</td>
<td>63.10a</td>
<td>57.38c</td>
</tr>
<tr>
<td>NEUTRAL</td>
<td>62.93a</td>
<td>59.38c</td>
</tr>
</tbody>
</table>

*NOTE: t critical = 4.1 (6 MEANS, 114 df, 40/cell); means that do not share a common letter differ significantly. Lower scores indicate faster counting.

For the PANAS (see Table 6), there was significant difference between all three post means (elation-neutral difference=11.85; elation-depression difference=23.43; depression-neutral difference=11.58). Elation (difference =9.28) and depression (difference=14.68) differed significantly from pre to post but neutral did not.

**TABLE 6**

<table>
<thead>
<tr>
<th>MOOD</th>
<th>PRE-MEAN</th>
<th>POST-MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPRESSION</td>
<td>-15.03a</td>
<td>-00.35b</td>
</tr>
<tr>
<td>ELATION</td>
<td>-14.05a</td>
<td>-23.78c</td>
</tr>
<tr>
<td>NEUTRAL</td>
<td>-15.13a</td>
<td>-11.93d</td>
</tr>
</tbody>
</table>

*NOTE: t critical= 4.1 (6 MEANS, 114 df, 40/cell); means that do not share a common letter differ significantly. Lower scores indicate greater elation.
For the MAACL (see Table 7), there was significant difference between all three post means (elation-neutral difference 3.32, depression-elation difference 14.75, depression-neutral difference 11.43). Depression was the only condition to change significantly from pre to post (difference =12.9).

**TABLE 7**
TUKEY’S PAIRWISE COMPARISONS FOR MAACL

<table>
<thead>
<tr>
<th>MOOD</th>
<th>PRE-MEAN</th>
<th>POST-MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEPRESSION</td>
<td>-7.20ac</td>
<td>5.70b</td>
</tr>
<tr>
<td>ELLATION</td>
<td>-6.23ac</td>
<td>-9.05c</td>
</tr>
<tr>
<td>NEUTRAL</td>
<td>-7.80ac</td>
<td>-5.73a</td>
</tr>
</tbody>
</table>

*NOTE: t critical = 4.1 (6 MEANS, 114 df, 40/cell); means that do not share a common letter differ significantly. Lower scores indicate greater elation.

**Gender Differences**

The complex repeated measure ANOVA’s revealed that writing speed and the PANAS had significant gender by pre-post differences (see Table 8).

**TABLE 8**
REPEATED MEASURE ANOVA

<table>
<thead>
<tr>
<th>Measure</th>
<th>SUM OF SQUARES</th>
<th>F</th>
<th>SIGNIFICANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing</td>
<td>65.10</td>
<td>5.04</td>
<td>.027</td>
</tr>
<tr>
<td>Counting</td>
<td>5.10</td>
<td>0.28</td>
<td>.598</td>
</tr>
<tr>
<td>PANAS</td>
<td>166.67</td>
<td>4.41</td>
<td>.038</td>
</tr>
<tr>
<td>MAAACL</td>
<td>2.40</td>
<td>0.10</td>
<td>.757</td>
</tr>
</tbody>
</table>
For the Panas (see Table 9), Tukey's pairwise comparisons indicated a significant difference between the post means of men and women (difference=4.03). Since for writing speed the pairwise comparisons indicated that the significant differences existed prior to, but not after, mood manipulation, this should probably not be interpreted as a legitimate gender difference.

<table>
<thead>
<tr>
<th>TABLE 9</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUKEY'S PAIRWISE COMPARISONS FOR PANAS/SEX</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>SEX</td>
</tr>
<tr>
<td>MALES</td>
</tr>
<tr>
<td>FEMALES</td>
</tr>
</tbody>
</table>

*Note t critical=3.68 (4 means, 114df, 60/cell); means that do not share a common letter differ significantly.

The Relationship Between Effort and VMIP Effectiveness

Pearson product moment correlations were computed for effort and Post scores for each measure. None of the correlations were large enough to warrant further investigation (See Appendix M; largest $r=.121$ which accounts for only 1.4% of the variance).

The Relationship Between Time and Subject Contamination

Pearson product moment correlations were computed between the time elapsed from the beginning of the study and subject's self-reported prior experimental knowledge. None
of the correlations were large enough to warrant further investigation (See Appendix M; largest $r=-.179$ which accounts for only 3.2% of the variance).
The Velten Mood Induction Procedure is a widely used tool for studying mood and the effects of mood (Larsen & Sinnet, 1991). Nevertheless, despite its wide use, the effectiveness of the VMIP has been unclear (Kenealy, 1986). A goal of this study was to provide experimental evidence that would add clarity to the effectiveness of the VMIP. The first hypothesis was that the VMIP would produce changes approaching significance on all measures, but it would not be so effective so as to produce a significant difference between the elation, neutral, and depression groups for every measure.

The first hypothesis was confirmed. Pre and post means significantly differed for all measures—writing speed, counting speed, the PANAS, and the MAACL. There was a significant difference between the depression and elation post means for every measure. Except for writing speed, the neutral post mean fell between the elation and depression means. Significant differences between the pre means for writing suggest that even this exception might be unusual. The three mood conditions significantly differed at post with groups using the PANAS and MAACL. The fact that the
VMIP did produce significant changes on each measure suggests that it is effective at manipulating mood.

Martin (1990) has suggested that a major difficulty in assessing the effectiveness of the VMIP is the large number of mood measures used. Because experimenters use different measures, it is impossible to compare the results between studies. A goal of this experiment was to examine how the most widely used mood measurements compared to one another and to provide some norms that future researchers could use to get a better idea of the expected results for each measure and to be able to make adequate comparisons between studies.

The only difference between subject groups was the type of mood measurement used to assess the changes produced by the VMIP. Given that this was the only difference between groups, it is possible to infer that differences between groups is a function of the measurement used.

The elation group showed significant changes from pre to post on all measures except for the MAACL. In contrast to previous speculation (Smith & Jeffrey, 1990), these findings suggest that the VMIP is effective at producing an elation effect. Smith and Jeffrey (1990) were not able to produce a significant mood change from pre to post using a variation of the VMIP elation condition. Interestingly, the only mood check they used was the MAACL. The PANAS and MAACL both provide scores with which one can place a subject
on a continuum from depressed to elated. Results from both scales show that subjects typically start in a relatively elated mood (See Table 3). Subjects in the MAACL condition have an overall mean of -7.075 within a continuum of -20 to 20 (negative scores indicating elation). It is possible there is a ceiling effect when using the MAACL to measure elation. Although subjects in the PANAS condition also start off relatively elated (-14.883), it may not be as vulnerable as the MAACL to a ceiling effect because it has a wider range of possible scores (-40 to 40).

Perhaps it is because subjects start off elated and there is more possibility for change or, perhaps, because the depression condition is just more powerful; it is generally credited with being a more effective mood manipulator than the elation condition of the VMIP (Chartier and Ranieri, 1989). All measures demonstrated a significant change from pre to post in the depression condition except for writing. As mentioned above, the pre means of the writing condition were significantly different. The subjects of the depression group started the procedure writing significantly faster than the neutral and elation groups. This difference was the only significant difference between any of the pre groups; all other measures had equivalent means at pre. The significant difference at pre for writing was unpredictable, is unusual, and attributed to an unlucky effect of the random assignment.
One clear problem with the VMIP does emerge from these findings. The neutral condition does not always maintain a subject’s mood level. On both the PANAS and counting speed measures, the neutral group experienced significant mood change from pre to post. In the case of counting speed, had neutral subjects maintained mood all three groups would have been different at post. A pattern of neutral movement did develop in this study. For the two behavioral measures, neutral subjects shifted toward a more elated mood. For the self-report measures, subjects shifted toward a more depressed mood. A possible interpretation of this pattern is that the neutral condition is considered tedious which causes subject to report lower mood. In the case of the behavioral measures, it is possible that the practice effect is more pronounced in the neutral than the other conditions. A possible implication for future research is that the neutral group be adjusted or omitted. The neutral condition is not creating a control group as it was intended. It has the tendency to effect mood and thus produce non-significant results between the experimental and control groups. The possibility that the neutral condition is not neutral and that the depression condition may be more powerful than the elation condition are areas that should be explored in future research.

The role that demand characteristics might play in the effect produced by the VMIP has been investigated. As of
yet, there exists no clear proof whether the effects are the result of demand characteristics (Slyker and McNally, 1991), are partly the result of demand characteristics (Larsen & Sinnet, 1991) or independent of them (Berkowitz & Troccoli, 1986). Because, historically, more studies using self-reports produced significant effects (Kenealy, 1986) and researchers have argued that self-reports are more susceptible than direct behavioral measures to demand characteristics (Larsen & Sinnet, 1991), it was hypothesized that self-reports (PANAS and MAACL) would show more change than behavioral measures (counting speed and writing speed). This hypothesis was somewhat confirmed. Subjects in both self-report groups produced post means such that each mood condition was significantly different. Neither of the direct behavioral measures resulted in significant differences between all groups at post. This indicates that the self-reports might be more sensitive to the VMIP than the direct behavioral measures. However, this is not indisputable. Looking only at the elation and depression condition (excluding neutral where there should be no change), self-report measures showed significant change from pre to post in three (depression twice, elation once) of four conditions. The direct behavioral measures also resulted in three (depression once, elation twice) out of four significant changes from pre to post.
This study was not designed to specifically examine the role of demand characteristics on the VMIP. However, if one were to assess the role of demand characteristics by looking at whether direct behavioral measures are effected, the present experimental findings suggest one would have to conclude that there is more to the effects of the VMIP than simply demand characteristics. However, in the case of the VMIP, this author questions whether such a simple analysis is adequate. It is arguable that with an experimental procedure containing statements such as "I feel superb! I think I can work to the best of my ability" and "I just don't seem to be able to get going as fast as I used to" might be just as likely to contribute to demand effects as measured by counting speed and writing speed as they might by self-reports.

The issue of the effects of demand characteristics and their role in the VMIP can not be answered based on this study's data. Nevertheless, based on the review of the literature (Berkowitz & Troccoli, 1986; Larsen & Sinnet, 1991; Polivy & Doyle, 1980; Riskind & Rholes, 1985) and the relatively strong effects on all measures, it is this investigator's opinion that the VMIP has an effect beyond those that might be attributable to demand characteristics. Without question, future research will have to untangle this problem.
Concerning the issue of standardization, the means and standard deviations for each of the measures by mood and sex have been presented in the results section (Table 3) of this paper. The scoring procedure for all measures is included in Appendix J and a complete listing of the raw data has also been provided in Appendix 0. Future researchers can use these to make comparisons between studies using similar experimental procedures on similar subject populations.

An attempt was made to compare the means in this study with previous research. However, with the exception of the validation articles by Watson, Clark, & Tellegen (1991) on the PANAS, and Zuckerman et al (1964) on the MAACL, the scoring procedure for the dependent measures was not described in any of the research reviewed. Without specific scoring directions it is impossible to make comparisons between studies.

Concerning the PANAS, as was previously presented, this study produced an overall pre mean of -14.883. In Watson et al (1991), their group yielded a positive affect score of 29.7 and a negative affect score of 14.8 which when combined is an overall mean of -14.9. The virtually identical group means across time and subject populations provides some evidence to the PANAS' reliability.

Concerning the MAACL, most of the articles reviewed (Blackburn et al, 1990; Buchwald et al, 1981; Frost et al, 1982; Frost et al, 1979; Lewis & Harder, 1988; Nagata &
Trierweiler, 1988; Nelson & Stern, 1988; Ruderman, 1985; Schare & Lisman, 1984; Strickland et al., 1975; Wilson & Krane, 1980; Zuckerman et al., 1965) did not provide means for comparison. Others (Kenealy, 1982; Marks & Hammen, 1982; Polivy, 1981; Smith & Jeffrey, 1990; Velten, 1967; Velten, 1968) did provide means but the specific form of the MAACL or the scoring procedure was unclear. In this study, the MAACL pre means for females was -7.6 and for males was -7.32. In Zuckerman et al.'s (1964) validation study, pre means for females was the equivalent of -7.6 and for males was -4.05. The difference between Zuckerman et al.'s (1964) is not statistically significant. In comparing the means across studies, the two female means are identical; the two male means are different (it is not possible to determine statistical significance). Because of changes in perceptions of sex roles, it is possible that the initial difference between the groups in 1964 is no longer exist in 1993. In any case, at least for women, the MAACL shows good reliability.

Because of procedural differences between this study and others (Richardson & Taylor, 1982; Slyker & Mcnally, 1991) counting time means are not comparable. Similarly, due to the absence of reporting or profound procedural changes the means for writing are not comparable to means in other studies (Aderman, 1972; Goodwin & Williams, 1982; Hale & Strickland, 1976; Natale, 1978; Natale & Bolan, 1978).
Many experimenters (Albersnagel, 1988; Lewis & Harder, 1988), including Velten, have argued that the VMIP only works on women. It was hypothesized that women would show more change than men. This was found to be true as measured by the PANAS which seems to be the most sensitive instrument to the VMIP. However, it was exactly that--more change. The procedure was effective in producing mood change in men. It only showed more change for women in the case of the PANAS. Also, the fact that no other measures indicated this difference and that there was not a significant moodXsexXpre-post interaction for any measure suggests that the significant difference indicated by the PANAS be viewed cautiously.

Despite the lack of a significant relationship between subject reported effort and mood change, this author continues to believe there is one. It is possible that because of the presence of the experimenter subjects did consistently try harder and their reporting of effort was generally accurate. Since the reported effort does not relate to mood change, this implies that the level of subject involvement in the procedure has no impact on its effectiveness. Although there is no data to support this, it seems more likely that subjects were reluctant to report low effort and their actually is a relationship between trying to follow the procedure and mood change. Perhaps, a
measure that more strongly encouraged honest reporting might have better success.

The issue of subject contamination is more ambiguous. There was not a significant relationship found between the date and prior knowledge. However, subjects consistently reported no prior knowledge despite the fact that in some cases this was clearly not true. For example, one prospective subject responded negatively to all four questions concerning having prior knowledge. However, within the first few cards of the experimental manipulation, the subject realized he had already served as a subject! This and several similar examples lead the author to strongly suspect that some subjects, at least, under reported their prior knowledge. Perhaps, this might be a function of fear of being rejected as a subject and not having the opportunity to earn the required experimental credit. In any case, the actual amount of subject contamination and any effects it had on the present study is inconclusive.

The Velten Mood Induction Procedure demonstrated itself as an effective instrument of mood manipulation. It produced strong changes with all measures. This includes the behavioral measures which, in some experimenter’s minds, mitigates the role of demand characteristics. Also, the often tooted sex differential showed up, but only for one measure and on top of significant change for men as well.
One reason the VMIP fared so well may have been the nature of the design. Subjects were exposed to all sixty statements of the various procedures as opposed to an abridged version. Subjects were run individually in the presence of an experimenter and only given one measure. Only responding to one measure, immediately after the manipulation when the effects are greatest, increases the likelihood of finding a change. Also, being run individually in the presence of an experimenter probably increases the likelihood that the procedure is carried out accurately and seriously. Admittedly, this is post-hoc speculation, but it seems that the procedure used in this study, although more time consuming, created a situation where the VMIP’s effect would most likely occur. It would be interesting for future studies to examine the effect of some of these process variables such as group versus individual administration and experimenter presence versus absence.

Concerning mood measurement, all measures showed changes as a product of the VMIP. However, the PANAS seemed to be the most sensitive. This is a new instrument and, to my knowledge, has not been used in conjunction with the VMIP prior to this date. It is recommended that future mood research should incorporate the PANAS.
References


Larsen, R. J., & Ketelaar, T. (1989). Extraversion, Neuroticism and susceptibility to positive and negative


Velten, E. (1967). *The Induction of Elation and Depression*


APPENDIX A

INSTRUCTIONS AND STATEMENTS FOR THE DEPRESSION CONDITION OF THE VMIP

DIRECTIONS

CARD 1

PLEASE READ EACH OF THE FOLLOWING CARDS TO YOURSELF. THEN READ EACH OF THE CARDS OUT LOUD. LET'S START WITH THIS CARD. BUT TO AVOID REPETITIOUSNESS, BEGIN WITH THE STATEMENTS BELOW THE LINE OF DASHES. AFTER YOU HAVE READ WHAT FollowS TO YOURSELF, READ IT ALOUD.

-------------------------------------------------------------------------------------------------

-----I WILL READ EACH OF THE FOLLOWING CARDS TO MYSELF. THEN I WILL READ EACH OF THE CARDS OUT LOUD, AND I WON'T WORRY ABOUT THE READING ERRORS WHICH OFTEN OCCUR IN UNFAMILIAR SITUATIONS.

CARD 2

IN THE FIRST PART OF THIS EXPERIMENT, I WILL BE SHOWN A SERIES OF CARDS WITH STATEMENTS TYPED ON THEM. THESE STATEMENTS REPRESENT A CERTAIN MOOD. MY SUCCESS WILL BE LARGELY A QUESTION OF MY WILLINGNESS TO BE RECEP TIVE AND RESPONSIVE TO THE IDEA IN EACH STATEMENT, AND TO ALLOW EACH IDEA TO ACT UPON ME WITHOUT INTERFERENCE. THESE IDEAS ARE CALLED SUGGESTIONS.

CARD 3

FIRST, AS EACH STATEMENT IS PLACED BEFORE ME, I WILL SIMPLY READ IT TO MYSELF, AND THEN I WILL READ IT ONCE OUT LOUD IN A MANNER APPROPRIATE TO ITS INTENDED SERIOUSNESS. THEN I'LL GO OVER EACH STATEMENT AGAIN AND AGAIN IN MY HEAD WITH THE DETERMINATION AND WILLINGNESS TO REALLY BELIEVE IT. I WILL EXPERIENCE EACH IDEA. I WILL CONCENTRATE MY FULL ATTENTION ON IT. AND I WILL EXCLUDE OTHER IDEAS WHICH ARE UNRELATED TO THE MOOD -- LIKE, "I'LL SEE IF THIS WILL WORK."

CARD 4

I WILL ALWAYS ATTEMPT TO RESPOND TO THE FEELING SUGGESTED BY EACH ITEM. I WILL THEN TRY TO THINK OF MYSELF WITH AS MUCH CLARITY AND REALISM AS POSSIBLE AS DEFINITELY BEING AND MOVING INTO THAT MOOD STATE. I AM LETTING MYSELF BE RECEP TIVE TO THESE FEELINGS. DIFFERENT PEOPLE MOVE INTO MOODS IN DIFFERENT WAYS. WHATEVER INDUCES THE MOOD IN ME THE FASTEST AND MOST DEEPLY IS THE BEST WAY FOR ME. SOME PEOPLE SIMPLY REPEAT THE STATEMENTS OVER AND OVER AGAIN TO THEMSELVES WITH THE INTENTION OF EXPERIENCING THEM.
CARD 5
SOME PEOPLE FIND IT NATURAL AND EASY FOR THEM TO VISUALIZE A
SCENE IN WHICH THEY HAD OR WOULD HAVE HAD SUCH A FEELING OR
THOUGHT. OR, PERHAPS SOME EASY COMBINATION OF REPEATING THE
STATEMENTS AND IMAGINING SCENES WILL COME TO ME. VERY
LIKELY, I WILL BEGIN TO FEEL THE WAY I DO WHEN I'M IN THAT
MOOD. I WILL CONTINUE TO CONCENTRATE MY FULL CONSCIOUSNESS
ON EXPERIENCING AND RETAINING THE MOOD AS THE EXPERIMENTER
PRESENTS EACH SUGGESTION. A CERTAIN AMOUNT OF TIME WILL BE
DEVOTED TO EACH SUGGESTION. I WILL CONTINUE TO DISCIPLINE
AND TRAIN MYSELF IN INDUCING A MOOD IN MYSELF BY
CONCENTRATING MY FULL ATTENTION ON THE MOOD-STATEMENTS
DURING ANY TIME INTERVAL.

CARD 6
TO SUM UP: THE WHOLE PURPOSE OF THIS EXPERIMENT IS TO SEE
WHETHER A PERSON CAN TALK HIMSELF INTO A MOOD. SOME OF THE
MOOD-STATEMENTS MAY HAVE NO RELATION TO ANYTHING I HAVE EVER
THOUGHT, SAID, OR DONE. YET, EXACTLY IN THE MANNER OF
HYPNOSIS, I WILL FIND IT QUITE EASY TO ACCEPT AND FEEL THESE
EMOTIONS. I WILL BE CONCENTRATING ON DOING SO, RATHER THAN
COMPARING EACH SINGLE STATEMENT TO MY LIFE EXPERIENCE AND
THEN DECIDING WHETHER IT APPLIES TO ME. I WILL LET AND
STRIVE TO LET THEM APPLY TO ME. I CAN DO THIS.

CARD 7
I EXPERIENCE EACH STATEMENT AS IF IT WERE ESPECIALLY WRITTEN
FOR ME. AT FIRST I MAY FEEL THE IMPULSE TO COMPARE A SINGLE
MOOD-STATEMENT TO MY LIFE EXPERIENCE, OR TO RESIST
STATEMENTS WHICH SEEM TO BE OR ARE CONTRADICTORY TO WHAT I
FEEL MYSELF TO BE. BUT, MOST PEOPLE FEEL THIS AT FIRST. IT
WILL BECOME APPARENT TO ME THAT IF I AM ABLE TO TALK MYSELF
INTO A MOOD, THEN OBVIOUSLY I KNOW HOW TO TALK MYSELF OUT OF
ONE. IF I FIND THAT I CAN DO THESE THINGS, THEN I HAVE
LEARNED SOMETHING VALUABLE ABOUT MYSELF, I CAN LEARN TO
CONTROL MY MOODS TO AN EXTENT.

CARD 8
IF I FEEL THE URGE TO LAUGH, IT WILL PROBABLY BE BECAUSE
HUMOR IS A GOOD WAY TO COUNTERACT UNWANTED FEELINGS -- OR,
IT MIGHT BE BECAUSE I AM SURPRISED THAT I REALLY AM GOING
INTO THE MOOD. I WILL TRY TO AVOID THESE REACTIONS,
HOWEVER, BY KEEPING IN MIND THAT I HAVE THE CHANCE OF
ACQUIRING EXTREMELY USEFUL INFORMATION ABOUT MYSELF AND HOW
TO HELP MYSELF OUT OF UNDESIRABLE MOODS THAT OCCUR IN
EVERYDAY LIFE. IF FOR ANY REASON I FEEL I CANNOT CONTINUE,
I WILL SO INDICATE.

CARD 9
THE NEXT CARD WILL BEGIN THE SERIES OF STATEMENTS. I WILL
READ EACH TO MYSELF, THEN I WILL READ IT OUT LOUD. THEN I
WILL TRY TO EXPERIENCE THE MOOD AS WELL AS I CAN AND
CONTINUE TO DO SO AS THE EXPERIMENTER PRESENTS THE CARDS AND I MOVE FURTHER INTO THE MOOD. AFTER THE CARDS WILL BE A BRIEF TASK TO PERFORM.

MOOD STATEMENTS

CARD 1
TODAY IS NEITHER BETTER NOR WORSE THAN ANY OTHER DAY.

CARD 2
HOWEVER, I FEEL A LITTLE LOW TODAY.

CARD 3
I FEEL RATHER SLUGGISH NOW.

CARD 4
SOMETIMES I WONDER WHETHER SCHOOL IS ALL THAT WORTHWHILE.

CARD 5
EVERY NOW AND THEN I FEEL SO TIRED AND GLOOMY THAT I’D RATHER JUST SIT THAN DO ANYTHING.

CARD 6
I CAN REMEMBER TIMES WHEN EVERYBODY BUT ME SEEMED FULL OF ENERGY.

CARD 7
TOO OFTEN I HAVE FOUND MYSELF STARING LISTLESSLY INTO THE DISTANCE, MY MIND A BLANK, WHEN I DEFINITELY SHOULD HAVE BEEN STUDYING.

CARD 8
IT HAS OCCURRED TO ME MORE THAN ONCE THAT STUDY IS BASICALLY USELESS, BECAUSE YOU FORGET ALMOST EVERYTHING YOU LEARN ANYWAY.

CARD 9
PEOPLE ANNOY ME; I WISH I COULD BE BY MYSELF.

CARD 10
I’VE HAD IMPORTANT DECISIONS TO MAKE IN THE PAST, AND I’VE SOMETIMES MADE THE WRONG ONES.

CARD 11
I DO FEEL SOMEWHAT DISCOURAGED AND DROWSY -- MAYBE I’LL NEED A NAP WHEN I GET HOME.

CARD 12
PERHAPS COLLEGE TAKES MORE TIME, EFFORT, AND MONEY THAN IT’S WORTH.
CARD 13*
(I'M AFRAID THE WAR IN VIET NAM MAY GET A LOT WORSE.)
SOMETIMES I WONDER IF MY FRIENDS ARE JUST USING ME.

CARD 14
I JUST DON'T SEEM TO BE ABLE TO GET GOING AS FAST AS I USED TO.

CARD 15
THERE HAVE BEEN DAYS WHEN I FELT WEAK AND CONFUSED, AND EVERYTHING WENT MISERABLY WRONG.

CARD 16
JUST A LITTLE BIT OF EFFORT TIRES ME OUT.

CARD 17
I'VE HAD DAYDREAMS IN WHICH MY MISTAKES KEPT OCCURRING TO ME -- SOMETIMES I WISH I COULD START OVER AGAIN.

CARD 18
I'M ASHAMED THAT I'VE CAUSE MY PARENTS NEEDLESS WORRY.

CARD 19
I FEEL TERRIBLY TIRED AND INDIFFERENT TO THINGS TODAY.

CARD 20
JUST TO STAND UP WOULD TAKE A BIG EFFORT.

CARD 21
I'M GETTING TIRED OUT. I CAN FEEL MY BODY GETTING EXHAUSTED AND HEAVY.

CARD 22
I'M BEGINNING TO FEEL SLEEPY. MY THOUGHTS ARE DRIFTING.

CARD 23
AT TIMES I'VE BEEN SO TIRED AND DISCOURAGED THAT I WENT TO SLEEP RATHER THAN FACE IMPORTANT PROBLEMS.

CARD 24
MY LIFE IS SO TIRESOME -- THE SAME OLD THING DAY AFTER DAY DEPRESSES ME.

CARD 25
I COULDN'T REMEMBER THINGS RIGHT NOW IF I HAD TO.

CARD 26
I JUST CAN'T MAKE UP MY MIND; IT'S SO HARD TO MAKE SIMPLE DECISIONS.

CARD 27
I WANT TO GO TO SLEEP -- I FEEL LIKE JUST CLOSING MY EYES AND GOING TO SLEEP RIGHT HERE.

CARD 28
I’M NOT VERY ALERT; I FEEL LISTLESS AND VAGUELY SAD.

CARD 29
I’VE DOUBTED THAT I’M A WORTHWHILE PERSON.

CARD 30
I FEEL WORN OUT. MY HEALTH MAY NOT BE AS GOOD AS IT’S SUPPOSED TO BE.

CARD 31
IT OFTEN SEEMS THAT NO MATTER HOW HARD I TRY, THINGS STILL GO WRONG.

CARD 32
I’VE NOTICED THAT NO ONE SEEMS TO REALLY UNDERSTAND OR CARE WHEN I COMPLAIN OR FEEL UNHAPPY.

CARD 33
I’M UNCERTAIN ABOUT MY FUTURE

CARD 34
I’M DISCOURAGED AND UNHAPPY ABOUT MYSELF.

CARD 35
I’VE LAIN AWAKE AT NIGHT Worrying SO LONG THAT I Hated MySELF.

CARD 36
THINGS ARE WORSE NOW THAN WHEN I WAS YOUNGER.

CARD 37
THE WAY I FEEL NOW, THE FUTURE LOOKS Boring AND HELPLESS.

CARD 38
MY PARENTS NEVER REALLY TRIED TO UNDERSTAND ME.

CARD 39
SOME VERY IMPORTANT DECISIONS ARE ALMOST IMPOSSIBLE FOR ME TO MAKE.

CARD 40
I FEEL TIRED AND DEPRESSED; I DON’T FEEL LIKE WORKING ON THE THINGS I KNOW I MUST GET DONE.

CARD 41
I FEEL HORRIBLY GUILTY ABOUT HOW I’VE TREATED MY PARENTS AT TIMES.
CARD 42
I HAVE THE FEELING THAT I JUST CAN'T REACH PEOPLE.

CARD 43
THINGS ARE EASIER AND BETTER FOR OTHER PEOPLE THAN FOR ME. I FEEL LIKE THERE'S NO USE IN TRYING AGAIN.

CARD 44
OFTEN PEOPLE MAKE ME VERY UPSET. I DON'T LIKE TO BE AROUND THEM.

CARD 45
IT TAKES TOO MUCH EFFORT TO CONVINCE PEOPLE OF ANYTHING THERE'S. NO POINT IN TRYING.

CARD 46
I FAIL IN COMMUNICATING WITH PEOPLE ABOUT MY PROBLEMS.

CARD 47
IT'S SO DISCOURAGING THE WAY PEOPLE DON'T REALLY LISTEN TO ME.

CARD 48
I'VE FELT SO ALONE BEFORE, THAT I COULD HAVE CRIED.

CARD 49
SOMETIMES I'VE WISHED I COULD DIE.

CARD 50
MY THOUGHTS ARE SO SLOW AND DOWNCAST I DON'T WANT TO THINK OR TALK.

CARD 51
I JUST DON'T CARE ABOUT ANYTHING. LIFE JUST ISN'T ANY FUN.

CARD 52
LIFE SEEMS TO MUCH FOR ME ANYHOW -- MY EFFORTS ARE WASTED.

CARD 53
I'M SO TIRED

CARD 54
I DON'T CONCENTRATE OR MOVE. I JUST WANT TO FORGET ABOUT EVERYTHING.

CARD 55
I HAVE TOO MANY BAD THINGS IN MY LIFE.

CARD 56
EVERYTHING SEEMS UTTERLY FUTILE AND EMPTY.
CARD 57
I FEEL DIZZY AND FAINT. I NEED TO PUT MY HEAD DOWN AND NOT MOVE.

CARD 58
I DON'T WANT TO DO ANYTHING.

CARD 59
ALL OF THE UNHAPPINESS OF MY PAST LIFE IS TAKING POSSESSION OF ME.

CARD 60
I WANT TO GO TO SLEEP AND NEVER WAKE UP.
APPENDIX B

INSTRUCTIONS AND STATEMENTS FOR THE ELATION CONDITION OF THE VMIP

DIRECTIONS

CARD 1

PLEASE READ EACH OF THE FOLLOWING CARDS TO YOURSELF. THEN READ EACH OF THE CARDS OUT LOUD. LET'S START WITH THIS CARD. BUT TO AVOID REPETITIOUSNESS, BEGIN WITH THE STATEMENTS BELOW THE LINE OF DASHES. AFTER YOU HAVE READ WHAT FOLLOWS TO YOURSELF, READ IT ALOUD.

------------

-----I WILL READ EACH OF THE FOLLOWING CARDS TO MYSELF. THEN I WILL READ EACH OF THE CARDS OUT LOUD, AND I WON'T WORRY ABOUT THE READING ERRORS WHICH OFTEN OCCUR IN UNFAMILIAR SITUATIONS.

CARD 2

IN THE FIRST PART OF THIS EXPERIMENT, I WILL BE SHOWN A SERIES OF CARDS WITH STATEMENTS TYPED ON THEM. THESE STATEMENTS REPRESENT A CERTAIN MOOD. MY SUCCESS WILL BE LARGELY A QUESTION OF MY WILLINGNESS TO BE RECEPTIVE AND RESPONSIVE TO THE IDEA IN EACH STATEMENT, AND TO ALLOW EACH IDEA TO ACT UPON ME WITHOUT INTERFERENCE. THESE IDEAS ARE CALLED SUGGESTIONS.

CARD 3

FIRST, AS EACH STATEMENT IS PLACED BEFORE ME, I WILL SIMPLY READ IT TO MYSELF, AND THEN I WILL READ IT ONCE OUT LOUD IN A MANNER APPROPRIATE TO ITS INTENDED SERIOUSNESS. THEN I'LL GO OVER EACH STATEMENT AGAIN AND AGAIN IN MY HEAD WITH THE DETERMINATION AND WILLINGNESS TO REALLY BELIEVE IT. I WILL EXPERIENCE EACH IDEA. I WILL CONCENTRATE MY FULL ATTENTION ON IT. AND I WILL EXCLUDE OTHER IDEAS WHICH ARE UNRELATED TO THE MOOD -- LIKE, "I'LL SEE IF THIS WILL WORK."

CARD 4

I WILL ALWAYS ATTEMPT TO RESPOND TO THE FEELING SUGGESTED BY EACH ITEM. I WILL THEN TRY TO THINK OF MYSELF WITH AS MUCH CLARITY AND REALISM AS POSSIBLE AS DEFINITELY BEING AND MOVING INTO THAT MOOD STATE. I AM LETTING MYSELF BE RECEPTIVE TO THESE FEELINGS. DIFFERENT PEOPLE MOVE INTO MOODS IN DIFFERENT WAYS. WHATEVER INDUCES THE MOOD IN ME THE FASTEST AND MOST DEEPLY IS THE BEST WAY FOR ME. SOME PEOPLE SIMPLY REPEAT THE STATEMENTS OVER AND OVER AGAIN TO THEMSELVES WITH THE INTENTION OF EXPERIENCING THEM.
CARD 5
SOME PEOPLE FIND IT NATURAL AND EASY FOR THEM TO VISUALIZE A
SCENE IN WHICH THEY HAD OR WOULD HAVE HAD SUCH A FEELING OR
THOUGHT. OR, PERHAPS SOME EASY COMBINATION OF REPEATING THE
STATEMENTS AND IMAGINING SCENES WILL COME TO ME. VERY
LIKELY, I WILL BEGIN TO FEEL THE WAY I DO WHEN I’M IN THAT
MOOD. I WILL CONTINUE TO CONCENTRATE MY FULL CONSCIOUSNESS
ON EXPERIENCING AND RETAINING THE MOOD AS THE EXPERIMENTER
Presents EACH SUGGESTION. A CERTAIN AMOUNT OF TIME WILL BE
DEVOTED TO EACH SUGGESTION. I WILL CONTINUE TO DISCIPLINE
AND TRAIN MYSELF IN INDUCING A MOOD IN MYSELF BY
CONCENTRATING MY FULL ATTENTION ON THE MOOD-STATEMENTS
DURING ANY TIME INTERVAL.

CARD 6
TO SUM UP: THE WHOLE PURPOSE OF THIS EXPERIMENT IS TO SEE
WHETHER A PERSON CAN TALK HIMSELF INTO A MOOD. SOME OF THE
MOOD-STATEMENTS MAY HAVE NO RELATION TO ANYTHING I HAVE EVER
THOUGHT, SAID, OR DONE. YET, EXACTLY IN THE MANNER OF
HYPNOSIS, I WILL FIND IT QUITE EASY TO ACCEPT AND FEEL THESE
EMOTIONS. I WILL BE CONCENTRATING ON DOING SO, RATHER THAN
COMPARING EACH SINGLE STATEMENT TO MY LIFE EXPERIENCE AND
THEN DECIDING WHETHER IT APPLIES TO ME. I WILL LET AND
STRIVE TO LET THEM APPLY TO ME. I CAN DO THIS.

CARD 7
I EXPERIENCE EACH STATEMENT AS IF IT WERE ESPECIALLY WRITTEN
FOR ME. AT FIRST I MAY FEEL THE IMPULSE TO COMPARE A SINGLE
MOOD-STATEMENT TO MY LIFE EXPERIENCE, OR TO RESIST
STATEMENTS WHICH SEEM TO BE OR ARE CONTRADICTORY TO WHAT I
FEEL MYSELF TO BE. BUT, MOST PEOPLE FEEL THIS AT FIRST. IT
WILL BECOME APPARENT TO ME THAT IF I AM ABLE TO TALK MYSELF
INTO A MOOD, THEN OBVIOUSLY I KNOW HOW TO TALK MYSELF OUT OF
ONE. IF I FIND THAT I CAN DO THESE THINGS, THEN I HAVE
LEARNED SOMETHING VALUABLE ABOUT MYSELF, I CAN LEARN TO
CONTROL MY MOODS TO AN EXTENT.

CARD 8
IF I FEEL THE URGE TO LAUGH, IT WILL PROBABLY BE BECAUSE
HUMOR IS A GOOD WAY TO COUNTERACT UNWANTED FEELINGS -- OR,
IT MIGHT BE BECAUSE I AM SURPRISED THAT I REALLY AM GOING
INTO THE MOOD. I WILL TRY TO AVOID THESE REACTIONS,
HOWEVER, BY KEEPING IN MIND THAT I HAVE THE CHANCE OF
ACQUIRING EXTREMELY USEFUL INFORMATION ABOUT MYSELF AND HOW
TO HELP MYSELF OUT OF UNDESIRABLE MOODS THAT OCCUR IN
EVERYDAY LIFE. IF FOR ANY REASON I FEEL I CANNOT CONTINUE,
I WILL SO INDICATE.

CARD 9
THE NEXT CARD WILL BEGIN THE SERIES OF STATEMENTS. I WILL
READ EACH TO MYSELF, THEN I WILL READ IT OUT LOUD. THEN I
WILL TRY TO EXPERIENCE THE MOOD AS WELL AS I CAN AND
CONTINUE TO DO SO AS THE EXPERIMENTER PRESENTS THE CARDS AND I MOVE FURTHER INTO THE MOOD. AFTER THE CARDS WILL BE A BRIEF TASK TO PERFORM.

MOOD STATEMENTS

CARD 1
TODAY IS NEITHER BETTER NOR WORSE THAN ANY OTHER DAY.

CARD 2
I DO FEEL PRETTY GOOD TODAY, THOUGH.

CARD 3
I FEEL LIGHT-HEARTED.

CARD 4
THIS MIGHT TURN OUT TO HAVE BEEN ONE OF MY GOOD DAYS.

CARD 5
IF YOUR ATTITUDE IS GOOD, THEN THINGS ARE GOOD, AND MY ATTITUDE IS GOOD.

CARD 6
I’VE CERTAINLY GOT ENERGY AND SELF-CONFIDENCE TO SPARE.

CARD 7
I FEEL CHEERFUL AND LIVELY.

CARD 8
ON THE WHOLE, I HAVE VERY LITTLE DIFFICULTY IN THINKING CLEARLY.

CARD 9
MY PARENTS ARE PRETTY PROUD OF ME MOST OF THE TIME.

CARD 10
I’M GLAD I’M IN COLLEGE -- IT’S THE KEY TO SUCCESS NOWADAYS.

CARD 11
FOR THE REST OF THE DAY, I BET THINGS WILL GO REALLY WELL.

CARD 12
I’M PLEASED THAT MOST PEOPLE ARE SO FRIENDLY TO ME.

CARD 13
MY JUDGEMENT ABOUT THINGS IS SOUND.

CARD 14
IT’S ENCOURAGING THAT AS I GET FARTHER INTO MY MAJOR, IT’S GOING TO TAKE LESS STUDY TO GET GOOD GRADES.
CARD 15
I'M FULL OF ENERGY AND AMBITION — I FEEL LIKE I COULD GO A
LONG TIME WITHOUT SLEEP.

CARD 16
THIS IS ONE OF THOSE DAY WHEN I CAN GRIND OUT SCHOOL WORK
WITH PRACTICALLY NO EFFORT AT ALL.

CARD 17
MY JUDGEMENT IS KEEN AND PRECISE TODAY. JUST LET SOMEONE
TRY TO PUT SOMETHING OVER ON ME.

CARD 18
WHEN I WANT TO, I CAN MAKE FRIENDS EXTREMELY EASILY.

CARD 19
IF I SET MY MIND TO IT, I CAN MAKE THINGS TURN OUT FINE.

CARD 20
I FEEL ENTHUSIASTIC AND CONFIDANT NOW.

CARD 21
THERE SHOULD BE OPPORTUNITY FOR A LOT OF GOOD TIMES COMING
ALONG.

CARD 22
MY FAVORITE SONG KEEPS GOING THROUGH MY HEAD.

CARD 23
SOME OF MY FRIENDS ARE SO LIVELY AND OPTIMISTIC.

CARD 24
I FEEL TALKATIVE — I FEEL LIKE TALKING TO ALMOST ANYBODY.

CARD 25
I'M FULL OF ENERGY, AND AM REALLY GETTING TO LIKE THE THINGS
I'M DOING ON CAMPUS.

CARD 26
I'M ABLE TO DO THINGS ACCURATELY AND EFFICIENTLY.

CARD 27
I KNOW GOOD AND WELL THAT I CAN ACHIEVE THE GOALS I SET.

CARD 28
NOW THAT IT OCCURS TO ME, MOST OF THE THINGS THAT HAVE
DEPRESSED ME WOULDN'T HAVE IF I'D JUST HAD THE RIGHT
ATTITUDE.

CARD 29
I HAVE A SENSE OF POWER AND VIGOR.
CARD 30
I FEEL SO VIVACIOUS AND EFFICIENT TODAY -- SITTING ON TOP OF THE WORLD.

CARD 31
IT WOULD REALLY TAKE SOMETHING TO STOP ME NOW!

CARD 32
IN THE LONG RUN, IT'S OBVIOUS THAT THINGS HAVE GOTTEN BETTER AND BETTER DURING MY LIFE.

CARD 33
I KNOW THAT IN THE FUTURE I WON'T OVER-EMPHASIZE SO-CALLED "PROBLEMS".

CARD 34
I'M OPTIMISTIC THAT I CAN GET ALONG very well WITH MOST OF THE PEOPLE I MEET.

CARD 35
I'M TOO ABSORBED IN THINGS TO HAVE TIME TO WORRY.

CARD 36
I'M FEELING AMAZINGLY GOOD TODAY!

CARD 37
I AM PARTICULARLY INVENTIVE AND RESOURCEFUL IN THIS MOOD.

CARD 38
I FEEL SUPERB! I THINK I CAN WORK TO THE BEST OF MY ABILITY.

CARD 39
THINGS LOOK GOOD. THINGS LOOK GREAT!

CARD 40
I FEEL THAT MANY OF MY FRIENDSHIPS WILL STICK WITH ME IN THE FUTURE.

CARD 41
I CAN FIND THE GOOD IN ALMOST ANYTHING.

CARD 42
I FEEL SO GAY AND PLAYFUL TODAY I FEEL LIKE SURPRISING SOMEONE BY TELLING A SILLY JOKE.

CARD 43
I FEEL AN EXHILARATING ANIMATION IN ALL I DO.

CARD 44
I FEEL HIGHLY PERCEPTIVE AND REFRESHED.
CARD 45
MY MEMORY IS IN RARE FORM TODAY.

CARD 46
IN A BUOYANT MOOD LIKE THIS ONE, I CAN WORK FAST AND DO IT RIGHT THE FIRST TIME.

CARD 47
I CAN CONCENTRATE HARD ON ANYTHING I DO.

CARD 48
MY THINKING IS CLEAR AND RAPID.

CARD 49
LIFE IS SO MUCH FUN; IT SEEMS TO OFFER SO MANY SOURCES OF FULFILLMENT.

CARD 50
THINGS WILL BE BETTER AND BETTER TODAY.

CARD 51
I CAN MAKE DECISIONS RAPIDLY AND CORRECTLY; AND I CAN DEFEND THEM AGAINST CRITICISM EASILY.

CARD 52
I FEEL INDUSTRIOUS AS HECK -- I WANT SOMETHING TO DO!

CARD 53
LIFE IS FIRMLY IN MY CONTROL.

CARD 54
I WISH SOMEBODY WOULD PLAY SOME GOOD LOUD MUSIC.

CARD 55
THIS I GREAT -- I REALLY DO FEEL GOOD. I AM ELATED ABOUT THINGS.

CARD 56
I'M REALLY FEELING SHARP NOW.

CARD 57
THIS IS JUST ONE OF THOSE DAYS WHEN I'M READY TO GO!

CARD 58
I FEEL LIKE BURSTING WITH LAUGHTER -- I WISH SOMEBODY WOULD TELL A JOKE AND GIVE ME AN EXCUSE!

CARD 59
I'M FULL OF ENERGY.

CARD 60
GOD, I FEEL GREAT!
APPENDIX C

INSTRUCTIONS AND STATEMENTS FOR THE NEUTRAL CONDITION OF THE VMIP

DIRECTIONS

CARD 1
PLEASE READ EACH OF THE FOLLOWING CARDS TO YOURSELF. THEN READ EACH OF THE CARDS OUT LOUD. DON'T WORRY ABOUT THE READING ERROR WHICH OFTEN OCCUR IN UNFAMILIAR SITUATIONS. CONCENTRATE ON EACH OF THE STATEMENTS AS THEY ARE PLACED BEFORE YOUR, AND MAKE AN EFFORT TO CONTINUE TO DO SO UNTIL THE NEXT CARD IS PLACED. FOLLOWING THESE CARDS WILL BE A BRIEF TASK TO PERFORM.

MOOD STATEMENTS

CARD 1
OKLAHOMA CITY IS THE LARGEST CITY IN THE WORLD IN AREA, WITH 631.166 SQUARE MILES.

CARD 2
JAPAN WAS ELECTED TO THE UNITED NATIONS ALMOST FOURTEEN YEARS AFTER PEARL HARBOR.

CARD 3
AT THE END APPEARS A SECTION ENTITLED "BIBLIOGRAPHY NOTES."

CARD 4
WE HAVE TWO KINDS OF NOUNS DENOTING PHYSICAL THINGS; INDIVIDUAL AND MASS NOUNS.

CARD 5
THIS BOOK OR ANY PART THEREOF MUST NOT BE REPRODUCED IN ANY FORM.

CARD 6
AGRICULTURAL PRODUCTS COMPRISED SEVENTY PER CENT OF THE INCOME.

CARD 7
SATURN IS SOMETIMES IN CONJUNCTION, BEYOND THE SUN FROM THE EARTH, AND IS NOT VISIBLE.

CARD 8
SOME STREETS WERE STILL SAID TO BE LISTED UNDER THEIR OLD NAMES.
CARD 9
THE SYSTEM IS SUPERVISED BY ITS BOARD OF REGENTS.

CARD 10
THERE IS A LARGE ROSE-GROWING CENTER NEAR TYLER, TEXAS.

CARD 11
MANY STATES SUPPLY MILK FOR GRAMMAR SCHOOL CHILDREN.

CARD 12
IT IS GOD'S WILL THAT THE FITTEST SURVIVE.

CARD 13
THE TYPOGRAPHY, PAPER, AND BIND WERE OF THE HIGHEST QUALITY.

CARD 14
THE MACHINE DOMINATED COUNTY POSTS FOR AS LONG AS ANYONE COULD REMEMBER.

CARD 15
THE DESK WAS OLD, AND SCRATCHED INTO ITS SURFACE WAS A PROFUSION OF DATES, INITIALS, AND PLEADING MESSAGES.

CARD 16
THE ORIENT EXPRESS TRAVELS BETWEEN PARIS AND ISTANBUL.

CARD 17
WHEN THE BANYAN BENT DOWN UNDER ITS OWN WEIGHT, ITS BRANCHES BEGAN TO TAKE ROOT.

CARD 18
THERE ISN'T A SCIENTIFIC EXPLANATION FOR EVERY U.F.O. SIGHTING.

CARD 19
THE HOPE DIAMOND WAS SHIPPED FROM SOUTH AFRICA TO LONDON THROUGH THE REGULAR MAIL SERVICE.

CARD 20
THE REVIEW IS CONCERNED WITH THE FIRST THREE VOLUMES.

CARD 21
THE SHIP WAS ANCIENT, AND WOULD SOON BE RETIRED FROM THE FLEET.

CARD 22
SLANG IS A CONSTANTLY CHANGING PART OF THE LANGUAGE.

CARD 23
THERE IS A SMALL ARTICLE IN THE LOCAL NEWSPAPER WHICH INDICATES ACCEPTANCE OF THE KIDNAPPERS' TERMS.
CARD 24
THERE ARE SOME FORMS IN WHICH NO OATH IS REQUIRED.

CARD 25
INTRAMATICS FINDS MATES FOR THE LONELY.

CARD 26
99.1% OF ALASKA IS OWNED BY THE FEDERAL GOVERNMENT.

CARD 27
TWO MEN DRESSED AS REPAIRMEN WILL APPEAR SHORTLY AFTER THE VAN PULLS UP.

CARD 28
THE WOOD WAS DISCOLORED AS IF IT HAD BEEN HELD IN A FIRE.

CARD 29
A LIGHT WAS NOTICED IN THE DARK OUTSIDE, AND IT MOVE EERILY TOWARDS THE HOUSE.

CARD 30
PAINTING IN A FEW OTHER NON-EUROPEAN COUNTRIES IS TREATED IN A SEPARATE VOLUME.

CARD 31
A RECENT STUDY REVEALED THAT ONE HALF OF ALL COLLEGE STUDENTS WERE UNABLE TO FIND SUMMER JOBS.

CARD 32
PROVOKED AROUSAL AND ORIENTATION ARE ACCOMPANIED BY STEEPER NEGATIVE SHIFTS.

CARD 33
THE NAMES ON THE CHRISTMAS MAILING LIST ARE ALPHABETICALLY COLORED.

CARD 34
SIGNIFICANTLY, THESE CHANGES OCCUR DURING THE FULL MOON.

CARD 35
WEST SAMOA GAINED ITS INDEPENDENCE IN 1965.

CARD 36
THE MAGAZINE'S REPORT WAS SLANTED, AS USUAL.

CARD 37
THE MAP WOULD PROVE USELESS AS A BEGINNING GUIDE.

CARD 38
THE SPEAKER OUTLINED A PLAN WHEREBY THE CURRENT DEFICITS COULD BE ELIMINATED.
CARD 39
BLACK AND WHITE PICTURES ARE ARRANGED IN TEN SECTIONS.

CARD 40
THE VOICES COME ONLY AT NIGHT, AND WHISPER WORDS, TERRIBLE WORDS.

CARD 41
THE PAPERS HAD BEEN FRONT-PAGING IT FOR DAYS.

CARD 42
THE NOTICE MADE IT CLEAR THAT COFFEE BREAKS WERE BEING LIMITED.

CARD 43
NO MAN WORKED HARDER THAN HE.

CARD 44
POTTER WROTE NUMEROUS SATIRES ON SOCIAL CYNICISM.

CARD 45
BOEING’S MAIN PLANT IN SEATTLE EMPLOYS 35,000 PEOPLE.

CARD 46
THE DOORKEEPER WAS DRESSED IN RED.

CARD 47
DURING THE NEXT TEN YEARS, THE GROUP PARTICIPATED IN POLITICS.

CARD 48
THE ORGANIZATION DEPENDED ON PEOPLE FOR SUPPORT.

CARD 49
IN 1965, ELIZABETH MADE THE FIRST STATE VISIT BY A BRITISH MONARCH TO GERMANY IN 56 YEARS.

CARD 50
IT WAS THEIR SIXTH CONSECUTIVE BEST SELLER.

CARD 51
IT ALL FITTED IN WITH THE OFFICER’S STORY.

CARD 52
THE MERGER DID NOT CHANGE THE COMPANY’S POLICY.

CARD 53
THE MANSION WAS RENTED BY THE DELEGATION.

CARD 54
NINETY OCCUPATIONS WERE LISTED AS ELIGIBLE FOR THE GRADS IN BUSINESS.
CARD 55
UTHA IS THE BEEHIVE STATE.

CARD 56
CHANGES WERE MADE IN TRANSPORT OF LUMBER AFTER THE BORDER INCIDENT.

CARD 57
THE CHINESE LANGUAGE HAS MANY DIALECTS, INCLUDING CANTONESE, MANDARIN, AND WU.

CARD 58
THINGS WERE BOOMING ONCE AGAIN IN THE LITTLE GOLD RUSH TOWN OF ANGEL.

CARD 59
AT LOW TIDE THE HULK OF THE OLD SHIP COULD BE SEEN.

CARD 60
A FREE SAMPLE WILL BE GIVEN TO EACH PERSON WHO ENTERS THE STORE.
APPENDIX D

VISUAL ANALOGUE MOOD SCALE

Place a slash along each of the seven scales to indicate how you are feeling RIGHT NOW.

How tired do you feel RIGHT NOW?
0 (not at all) ________________________________ 100 (Extremely)

How anxious do you feel RIGHT NOW?
0 (not at all) ________________________________ 100 (Extremely)

How despondent do you feel RIGHT NOW?
0 (not at all) ________________________________ 100 (Extremely)

How sad do you feel RIGHT NOW?
0 (not at all) ________________________________ 100 (Extremely)

How happy do you feel RIGHT NOW?
0 (not at all) ________________________________ 100 (Extremely)

How angry do you feel RIGHT NOW?
0 (not at all) ________________________________ 100 (Extremely)

How apprehensive do you feel RIGHT NOW?
0 (not at all) ________________________________ 100 (Extremely)
APPENDIX E
MULTIPLE AFFECTIVE ADJECTIVE CHECKLIST

Directions: On this sheet you will find words which describe different kinds of moods and feelings. Mark an X in the boxes beside the words which describe how you feel RIGHT NOW. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work quickly.

1. ___ active
2. ___ adventurous
3. ___ affectionate
4. ___ afraid
5. ___ agitated
6. ___ agreeable
7. ___ aggressive
8. ___ alive
9. ___ alone
10. ___ amiable
11. ___ amused
12. ___ angry
13. ___ annoyed
14. ___ awful
15. ___ bashful
16. ___ bitter
17. ___ blue
18. ___ boro
19. ___ calm
20. ___ cautious
21. ___ cheerful
22. ___ clean
23. ___ complaining
24. ___ contented
25. ___ contrary
26. ___ cool
27. ___ cooperative
28. ___ critical
29. ___ cross
30. ___ critical
31. ___ cruel
32. ___ desperate
33. ___ destroyed
34. ___ devoted
35. ___ disagreeable
36. ___ discontented
37. ___ discouraged
38. ___ disgusted
39. ___ displeased
40. ___ energetic
41. ____ enraged 89. ____ peaceful
42. ____ enthusiastic 90. ____ pleased
43. ____ fearful 91. ____ pleasant
44. ____ fine 92. ____ polite
45. ____ fit 93. ____ powerful
46. ____ forlorn 94. ____ quiet
47. ____ frank 95. ____ reckless
48. ____ free 96. ____ rejected
APPENDIX F

POSITIVE AFFECT NEGATIVE AFFECT SCALE

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to the word. Indicate to what extent you feel this way RIGHT NOW, that is, at the present moment. Use the following scale to record your answers.

1  Very slightly or not at all
2  A little
3  Moderately
4  Quite a bit
5  Extremely

___ interested  ___ irritable
___ distressed  ___ alert
___ excited    ___ ashamed
___ upset      ___ inspired
___ strong     ___ nervous
___ guilty     ___ determined
___ scared     ___ attentive
___ hostile    ___ jittery
___ enthusiastic ___ active
___ proud      ___ afraid
APPENDIX G

DIRECTIONS FOR WRITING AND COUNTING MEASURES

WRITING

I WANT YOU TO WRITE OUT BY ONES, NUMBERS, IN DESCENDING ORDER FROM 100, UNTIL I HAVE AS MANY AS I NEED. YOU MAY BEGIN.

COUNTING

I WANT YOU TO COUNT OUT BY ONES, NUMBERS, IN DESCENDING ORDER FROM 100, UNTIL I HAVE AS MANY AS I NEED. YOU MAY BEGIN.
APPENDIX H

ORIENTING AND DEBRIEFING PROCEDURE

At the start of the study the experimenter would say:

This is a study in mood. Your job here is really easy.

All you have to do is follow some simple directions, fill out some questionnaires, and read some cards. I’ll be here the whole time in case you’re ever unsure about what you need to do. Ok? I’ll start off by asking you a few questions. Try to answer by responding with either a "yes" or a "no".

The experimenter then administered the prior knowledge checklist (Appendix I) and said:

OK, thanks. Here is the first questionnaire (gives VAMS). Read the directions at the top and fill it out. If you have any questions let me know.

DEBRIEFING

After each subject completed the post measure, the experimenter would say:

OK, before you leave I thought I would tell you a little bit more about this study. Basically, we are trying to determine what effect reading those statements has on behavior. There are two other sets of cards like the one you read. In all, there is a set of happy statements, one of depressing statements, and one that has neutral statements. In your case, we were looking at the effect of reading the appropriate mood set on appropriate dependent measure. We will be comparing your results with the results of other subjects in the different mood conditions and hopefully learn something about how mood can effect behavior. If you have any questions or want to find out about the results, Mark Lessard will be giving a presentation at the end of the study. He will put up posters and advertize in the KAIMAN to let people know when and where to go. Thanks again for your help. Please do not talk to anyone about what you did here; it could ruin the results of the study.
If the subject asked any questions at this point, the experimenter would answer design questions by reiterating the pertinent portions of the above paragraph. If questions about how the procedure works arose, the experimenter would discuss the supposed relationship between cognition and mood. Answers about specific interactions between condition and the dependent variables were similar to "We're not exactly sure what will happen; that's what we're trying to find out." None of the subjects were dissatisfied with the amount of information conveyed.

Concerning the mood induction, there was no adverse effect in either the neutral or elation conditions. Subjects who experienced the depression induction were asked how they felt. Most subjects only experienced a mild and brief depression. The few that were acutely affected were allowed to remain and discuss their reaction with the experimenter for as long as needed. They were reassured that the mood induction's effects are brief and that they will feel better shortly. All subjects who experienced the depressing mood induction had the opportunity to utilize the elation mood induction procedure to assuage any depressive effects that may linger. Several of the subjects utilized this option, none left the experiment adversely affected.
APPENDIX I

PRIOR-KNOWLEDGE CHECKLIST

Do you know anything about mood research?  yes or no
Are you familiar with the Velten Mood Induction Procedure?  yes or no
Before coming here, did you have any previous knowledge about what you are going to be asked to do during this study?  yes or no
Has anyone talked to you about this study?  yes or no

Subject Involvement Question

How much did you concentrate on the suggestions on the cards?

1. Not at all.
2. A little.
3. Average.
4. Quite a bit.
5. As much as I could.
APPENDIX J

Scoring Keys for Scales

Visual Analogue Mood Scale
Simply measure to the nearest centimeter from the beginning of the line on the left-hand side. You will come out with seven independent measures. Please record these on the right hand side of the paper after each question. On the "How Happy...." reverse score and then total all scores.

Multiple Affective Adjective Checklist
Add one point if the following adjectives are checked: alone, awful, blue, destroyed, discouraged, forlorn, gloomy, hopeless, lonely, lost, low, miserable, rejected, sad, suffering, sunk, terrible, tormented, unhappy, and wilted.

Subtract one point for each of the following adjectives that are checked:
active, alive, clean, enthusiastic, fine, fit, free, glad, good, happy, healthy, inspired, interested, lucky, merry, peaceful, safe, strong, whole, and young.

Ignore all other adjectives.

You will come up with one score within the range of -20 to 20. Please calculate and place in the upper right-hand corner of scale.

*Note many people score the MAACL such that depression adjectives are given one point and elation adjectives are given one point if they are not checked. These two scoring methods are not very different; the only effect is that the range is moved to 0 to 40.
To convert scores between scoring methods (-20=0, -19=1, -18=2...).

Positive Affect Negative affect Scale
Sum the total for the adjectives (E): enthusiastic, interested, determined, excited, inspired, alert, active, strong, proud, and attentive.

Sum the total for the adjectives (D): scared, afraid, upset, distressed, jittery, nervous, ashamed, guilty, irritable, and hostile.
Get a final score by subtracting E from D. Place this in the upper right-hand corner.

*Note: Some people score the PANAS such that they do not subtract the elation score from the depression score. Thus, people who score this way will come out with one positive affect score and one negative affect score for each subject.

Writing speed
Circle last number given within 60 seconds.

Counting speed
Discretely record last number stated within 30 seconds.
APPENDIX K

CELL MEANS FOR THE 3X2 VAMS ANALYSIS

Total population = 19.16

Treatment:
  Depression    = 19.49
  Elation       = 18.95
  Neutral       = 19.05

Gender
  Males        = 18.93
  Females      = 19.40

Treatment X Gender

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**APPENDIX L**

**COMPLETE ANOVAS FOR WRITING, COUNTING, PANAS, AND MAACL**

### WRITING ANOVA

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### COUNTING ANOVA

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APPENDIX M

PEARSON PRODUCT MOMENT CORRELATIONS

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**** r was unable to be determined since prior knowledge scores in the writing condition were always zero.
APPENDIX N

CODING KEY

Example: 15242025-05-135

First two numbers -- the date.
This number is dependent on when the subject was run.
If the subject was run:

- 10/06/92    enter a 01
10/07/92 - 10/13/92    enter a 02
10/14/92 - 10/20/92    enter a 03
10/21/92 - 10/27/92    enter a 04
10/28/92 - 11/03/92    enter a 05
11/04/92 - 11/10/92    enter a 06
11/11/92 - 11/17/92    enter a 07
11/18/92 - 11/24/92    enter a 08
11/25/92 - 12/01/92    enter a 09
12/02/92 - 12/08/92    enter a 10
12/09/92 - 12/15/92    enter a 11

Semester Break

- 01/24/93    enter 12
01/25/93 - 01/31/93    enter 13
02/01/93 - 02/07/93    enter 14
02/08/93 - 02/14/93    enter 15
02/15/93 - 02/21/93    enter 16
02/22/93 - 02/28/93    enter 17
03/01/93 - 03/07/93    enter 18
03/08/93 - 03/14/93    enter 19

For the example: 15 = subject run between 2/08 and 2/14

Third number -- mood condition.
If Depression enter a 1
If Elation    enter a 2
If Neutral    enter a 3

For the example: 2 = elation
Fourth number -- dependent measure.
   If Writing      enter a 1
   If Counting    enter a 2
   If PANAS       enter a 3
   If MAACL      enter a 4

For example: 4 = MAACL

Fifth number -- gender.
   Male           enter a 1
   Female        enter a 2

For example: 2 = female

Sixth number -- Prior Knowledge Checklist Score
   one point for each yes  enter total (0-4)

For example: 0 = 0

Seventh and eighth number -- VAMS
   For example B: 25

Ninth, Tenth, and Eleventh number -- score of first trial of dependent measure
   For example: -05

Twelfth, Thirteenth, and Fourteenth number -- score of second trial of dependent measure
   For example: -13

Fifteenth number -- score on subject involvement question
   enter the number of the circled response (1-5)
   For example: 5
### APPENDIX O

**CODED DATA**

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APPENDIX P

Institutional Review Board Proposal

MEASURING THE EFFECTS OF THE VELTEN MOOD

INDUCTION PROCEDURE

Investigator: Mark Lessard

1. The findings of research investigating the Velten Mood Induction Procedure (VMIP) is unclear as to the technique's specific effects. The purpose of this research is to clarify the effects of the VMIP as measured by the Multiple Affective Adjective Check List (MAACL), the Positive Affect Negative Affect Scale (PANAS), counting speed and writing speed. It is hypothesized that self-report measures (PANAS, MAACL) will show more of an effect than direct behavioral measures (counting speed, writing speed). All experimentation will take place in either the psychology-pharmacology building or the clinical psychology center.

2. Mood induction procedures are being used extensively in research and the VMIP is the most common method. A better understanding of the specific abilities of this procedure will assist in all areas of mood research. The human subject will have the opportunity to understand how mood can be influenced and its effects on behavior.
3. All subjects will fill out the Visual Analogue Mood Scale (VAMS). Dependent on condition they will then fill out the MAACL, PANAS, perform the counting task, or perform the writing task. The subjects will then read the statements of either the elation, depressed, or neutral condition of the VMIP. The statements of the positive and negative conditions are self-referent in nature. For example, for the positive condition, a subject would be instructed to read and try to feel, "If your attitude is good, then things are good, and my attitude is good." For the negative condition, subjects would be asked to read and try to feel statements such as "I'm discouraged and unhappy about myself." The neutral condition includes statements such as "Utah is the beehive state." After completing the VMIP, subjects will repeat whatever measure they completed prior to mood induction.

4. Subjects will be volunteers at least 18 years of age from summer session psychology classes.

5. Subjects will experience transient (most studies cite that most effects dissipate within ten minutes) mood changes.

6. After subjects in the depressed condition complete their testing, the experimenter will suggest that these subjects
read the statements of the elation induction procedure to counteract any lingering effects. Subjects will be debriefed.

7. A code will be assigned to each set of test materials. Therefore, it will not be necessary to record subject's names on anything but the list used to award experimental credit.

8. The form used to obtain informed consent is attached.

9. Not applicable.

10. Not necessary.

I HAVE READ THE ABOVE AND AGREE THAT IT IS AN ACCURATE REPRESENTATION OF THE PROCEDURES TO BE USED IN THIS STUDY.

D. Balfour Jeffrey, Ph.D.
Professor of Psychology
Chairperson of Thesis Committee