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# Examination of the clinical benefit of adding Reversal Theory concepts to the expressive writing paradigm

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**EXAMINATION OF THE CLINICAL BENEFIT OF  
ADDING REVERSAL THEORY CONCEPTS TO THE  
EXPRESSIVE WRITING PARADIGM**

by

Stephanie Ellis

A Dissertation Presented in Partial Fulfillment  
Of the Requirements for the Degree  
Doctor of Philosophy

COLLEGE OF EDUCATION  
LOUISIANA TECH UNIVERSITY

August 2009

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We hereby recommend that the dissertation prepared under our supervision  
by Stephanie Ellis

entitled Examination of the Clinical Benefits of Adding Reversal Theory  
Concepts to the Expressive Writing Paradigm

be accepted in partial fulfillment of the requirements for the Degree of  
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## ABSTRACT

Expressive writing as a form of emotional disclosure produces many physical and psychological benefits (Pennebaker, 2004). Central to the present study are findings that expressive writing decreases symptoms of depression, anxiety, and PTSD (Koopman, Ismailji, Holmes, Classen, Palesh, & Wales, 2005; Opre, Coman, Kallay, Rotaru, & Manier, 2005; Russ, 1992). Reversal Theory (RT) suggests that individuals experience the world from eight different psychological states including serious, playful, conforming, rebellious, mastery, sympathy, self, and other (Apter, 2007). Teaching individuals to be aware of and elicit these states also decreases depression and anxiety (Charat, 2006). The present study sought to determine if the clinical benefit in reducing subclinical symptoms of depression, anxiety, and PTSD in college students could be enhanced by the addition of RT concepts. Theoretically, this addition may increase the benefit derived from expressive writing by augmenting those processes believed to underlie the changes associated with expressive writing. These processes include reduction of inhibition through disclosure, emotional engagement and habituation, and cognitive changes including improved structure for understanding and increased insight (Lepore & Smyth, 2002).

The study involved three groups, each participating in a modified version of the traditional expressive writing paradigm. The control group wrote about trivial topics with instructions to be objective; the expressive writing group wrote about a previous

traumatic event with instructions to explore deepest thoughts and feelings; the Reversal Theory group wrote about a previous traumatic event with instructions to elicit and write from the perspective of the eight RT states. Participants were measured at the beginning and end of the study for symptoms of depression, anxiety, stress, and event-related stress. Though it was hypothesized that the RT group would show more clinical gain than the expressive writing group and that both experimental groups would fare better than the controls, the results indicated no significant differences among the groups on any of the measures. The author believes the nonsignificant findings most likely resulted from methodological issues including the relatively early collection of post-test data, the wide range of distress scores among participants, and group administration. Other factors may include the limited time for exposure in each RT state and the limited time for participants to develop a narrative of their trauma. Standardization of procedures and future research in this area, especially with regard to the clinical usefulness of Reversal Theory, is recommended.

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Author Stephanie Ellis  
Date 8-7-05

## **DEDICATION**

For Seth...I could never have done it without you, and it wouldn't have been worthwhile. For Mom & Dad...really, it's all because of you. Thanks.



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# **CHAPTER ONE**

## **INTRODUCTION**

### **Expressive Writing**

Expressive writing is a form of emotional disclosure that has a large body of research demonstrating a range of physiological and psychological benefits (Pennebaker, 1997). The following discussion elucidates the format of expressive writing, its benefits, and the theoretical bases for the use of expressive writing as a useful clinical technique.

### **Emotional Disclosure**

The idea that expressing emotions associated with trauma of distress is beneficial extends as far back as the beginnings of psychoanalysis, at least. This concept originated as a talk therapy; the goal was to recover repressed memories and their attendant emotions, and then release the accompanying emotion in order to free up psychic energy (Lepore & Smyth, 2002). Emotional expression has a place in all of the principal therapies in different measure, including psychodynamic, humanistic, experiential, behavioral, and cognitive (Whelton, 2004). Further, Coombs, Coleman, and Jones (2002) found that collaborative emotional exploration was significantly related to positive outcome regardless of type of therapy. Indeed, the simple notion that talking about upsetting experiences produces enhanced well being remains popular in both psychological research and conventional wisdom.

In addition to begin an important part of therapy, verbal expression regarding distressing thoughts and feelings is beneficial even outside of the professional therapeutic

setting and independent of the therapeutic alliance (Strauss, 2001). Among the benefits of emotional disclosure are decreased experiences of avoidance and intrusive thoughts, decreased negative thoughts, reduced painful feelings, cognitive changes, adaptive behavioral changes and increased self-esteem (Segal, 1993). Emotional expression is also related to significant decreases in hopelessness, obsessive-compulsive symptoms, depression, and negative emotion (Segal, 1999). Segal (1993) found that even vocally expressing emotions alone in a room related to personal loss produced substantial therapeutic effects. Pennebaker (1997a) has found some beneficial effects through therapeutic singing and drawing as well, so long as participants are familiar with the task (i.e., singers, artists). So it is clear that at least some of the beneficial effects of emotional disclosure can be gained without the time and expense of therapy.

### Beneficial Effects of Expressive Writing

Pennebaker and colleagues' body of work has demonstrated that "when individuals write about emotional experiences, significant physical and mental health improvements follow" (1997a, p. 162). How these changes take place is an issue addressed from several theoretical perspectives, which will be addressed later. Here, the physical and mental health benefits of emotional disclosure will be detailed.

#### *Physical Benefits*

A meta-analysis of written emotional disclosure found significant decreases in physical health symptoms (Frisina, Borod, & Lepore, 2004). Pennebaker and Beall (1986) saw student health center visits reduced by half in those college students in a written emotional disclosure experiment, compared to controls. A similar community study found reduced absenteeism at work (Francis & Pennebaker, 1992). Breast cancer

patients visited the doctor for cancer-related problems fewer times if they had engaged in a therapeutic writing task (Stanton et al., 2002). McKenna (1997) found reduced distress in sufferers of migraine headaches after an expressive writing journaling task. Likewise, patients with rheumatoid arthritis and asthma reported less physical dysfunction after written emotional disclosure (Symth, Stone, Hurewitz, & Kaell, 1999). Pennebaker, Keiholt-Glaser, and Glaser's (1988) landmark study showed improved immune system functioning as a result of emotional disclosure. These benefits were often observed over days, weeks, and months, demonstrating that the value of emotional disclosure is both widespread and long lasting.

#### *Emotional/Psychological Benefits*

Less surprising than the health benefits discovered, emotional disclosure has a positive effect on many psychological variables as well. Similar to the findings of positive physical changes, Gidron et al (2002) found that somaticizing patients (those who translate emotional stress into physical symptoms and have higher than average numbers of doctor's visits) also reduced their physician visits and physical symptoms by half. More purely psychological benefits were found by Campbell (2003), who saw reduced PTSD symptoms in women and Russ (1992) who found reduced anxiety in college students. In patients with Type I diabetes, emotional disclosure led to reduced feelings of depression (Bodor, 2002). Other positive mental health changes as a result of expressive writing include decreased trauma-related distress (Opre, Coman, Kallay, Rotaru, & Manier, 2005), decreased depression (Koopman, Ismailji, Holmes, Classen, Palesh, & Wales, 2005), and increased optimism along with reduced negative affect in adolescents (Soliday, E., Garofalo, J., & Rogers, D. (2004). Improvements in life satisfaction were found by Lyubomirsky, Sousa, and Dickerhoof (2006). Somewhat more

cognitive improvements have been documented as well; for example, reduced intrusive thoughts (Lepore, 1997) and improvements in working memory capacity (Klein, 2002).

However, some studies have shown no benefit from expressive writing techniques. For example, Earnhardt, Martz, Ballard, and Curtin (2002) examined the effect of emotional disclosure on women with negative body image and, while there were positive results, they were equal to placebo. Kovac and Range (2002) found physical health benefits using the writing task with students, but no improvements in mood or suicidal ideation. Graybeal (2005) did not find any of the expected effects when expressive writing was used with children of divorce. So despite the overwhelming variety of psychological benefits gained from emotional disclosure, care must still be taken to analyze the value of expressive writing with specific populations or presenting issues.

### Proposed Mechanisms of Expressive Writing

King (2002) suggests that, although the expressive writing is undoubtedly beneficial on both physical and psychological levels, the mechanism for the achieved benefits is still a mystery. Several theories exist that attempt to explain how expressive writing manages to display such a wide range of beneficial effects. These theories mimic the varying modalities of positive change – physical, cognitive, and emotional. One theory has not emerged as the prime contributor; in all likelihood, each of these theories has something to offer in the way of explaining how expressive writing works.

#### *Inhibition Theory*

The inhibition theory of emotional disclosure was born from research showing that individuals with the most health problems also tended to report having experienced a past traumatic event (Pennebaker, 1997a). More specifically, those with a perceived inability

to disclose regarding the trauma were the most afflicted, whereas those who reported having talked about the trauma suffered from fewer health problems (Pennebaker). This phenomenon is noted not only with individuals, but on the community level as well. After a disaster befalls a community (e.g., an earthquake), there is first a short period of increased collectivism and a high amount of discussing the incident (Pennebaker, 2003). After this, there is a period during which there is still a high incidence of thoughts and feelings about the incident, but decreased expression (written or verbal). During these weeks, visits to doctors and subjective feelings of poor health increase dramatically (Pennebaker). Several weeks later, health concerns decline along with a decline in the thoughts and feelings related to the incident (Pennebaker).

The increase in health problems, on an individual and community level, is suggested to stem from the biological stress of *inhibition*. Inhibition is the work of the mind to keep the individual from doing something, either actively (such as in the first stages of dieting) or passively (when the inhibition is automatic and requires less effort) (Pennebaker, 1997a). Inhibition in the case of a traumatic event involves keeping thoughts and feelings about the traumatic event to oneself, rather than talking or writing about them. Individuals who are high in inhibition suffer from higher blood pressure (Weinberger, Schwartz, & Davidson, 1979), higher risk of heart attacks (Dembroski, MacDougall, Williams, Haney, & Blumenthal, 1985), and poor immune functioning (Jamner, Shapiro, Hui, & Oakley, 1993). As noted above, after participating in an emotional disclosure experiment, health problems and doctor visits noticeably decrease (Pennebaker, 1997a). Stressful memories and thoughts are processed in the brain in a way that makes them very easily activated and highly accessible for re-experiencing (Klein, 2002). Thus, inhibition of distressing thoughts and feelings can be likened to a low-level

stressor, maintaining the autonomic nervous system arousal at a higher-than-normal level, resulting in diminished health (Pennebaker, 1997b).

There are several physiological changes that occur when one is disclosing unsettling information, what Pennebaker calls the “letting go experience” (1997a, p.48). One of these changes is skin conductance in the hands and feet, which is a measure of the stress of inhibition (Fowles, 1980). When an individual is disclosing, skin conductance decreases; when an individual is inhibiting the disclosure (e.g., talking about trivial things), skin conductance increases (Pennebaker, 1997a). Additional physiological changes occur, including an initial rise in blood pressure and heart rate when disclosing traumatic information, followed by a decrease after disclosing that is lower than starting blood pressure and heart rate (Pennebaker). It is important to note that there are individual differences in the way one responds physiologically to disclosure. The pattern described above is experienced by high disclosers, those who fully engage in the “letting go experience” and disclose very emotionally distressing things (Pennebaker, 1997a). On the other hand, low disclosers (those who disclose only moderately personal information and who do not report high personal involvement) show the opposite pattern in skin conductance, indicating that they inhibit during the disclosure, rather than letting go (Pennebaker). These findings lead to the conclusion that emotional disclosure (through expressive writing) may function to improve health by mitigating the unhealthy effects of inhibition. However, it only works if an individual experiences “letting go” (Pennebaker).

### *Habituation Theory*

Habituation occurs when repeated exposure to the same stimulus results in a decreased response (Lepore, Greenberg, Bruno, & Smyth, 2002). For example, repeated exposure to spiders (stimulus) will reduce the fear (response) of spiders even in the

absence of any other manipulation. Similarly, repeated exposure to traumatic memories will reduce the emotions that are related to the memory (Foa, Keane, & Friedman, 1995). A key component is that the emotion level is very high to begin with and gradually reduces over the course of the exposure (Foa, 1997). This is the trend seen in some expressive writing studies (e.g., Smyth, Stone, Hurewitz, & Kaell, 1999), though other studies (e.g., Pennebaker, Mayne, & Francis, 1997) showed a conflicting pattern. Several expressive writing studies have demonstrated the reduction of stress-related physical and psychological effects of intrusive thoughts, indicating that habituation had taken place (Lepore, Greenberg, Bruno, & Smyth, 2002). Specifically, expressive writing studies have diminished the relationship between intrusive thoughts and related symptoms of depression (Lepore, 1997) and respiratory illness (Lepore & Greenberg, 2002). The decrease in this relationship indicates a habituation to the intrusive thoughts.

Interestingly, research indicates that the habituation does not need to be directly related to a past or present traumatic experience in order to see improvement (Lepore, Greenberg, Bruno, & Smyth, 2002). That is, the expressive writing does not need to center on the previously experienced traumatic event. Even writing about imaginary traumatic events produces health benefits, suggesting that habituation to negative emotions in general may offer the same advantages as habituation to a specific memory (Greenberg, Wortman, & Stone, 1996). Because expressive writing has a continued exposure element (writing continuously for 20 minutes) and a repetition element (repeating the process over the course of three to five days), the gains produced from the habituation element of expressive writing are not surprising.



### *Cognitive Change Theory*

Expressive writing is more than simply catharsis or habituation, however. Habituation, though effective, does not typically occur in a vacuum and its favorable effects on traumatic experience are not assumed to act independently of other factors (Lepore, Greenberg, Bruno, & Smyth, 2002). Catharsis alone has not been shown to demonstrate health benefits (Krantz & Pennebaker, 1996) or increase positive psychotherapy outcome (Yalom, 1995). Though catharsis is valuable, Yalom indicates that it is not useful without some component of cognitive change. Gidron (2002) suggests that because traumatic memories are typically processed and stored in the sensory and affective areas of the brain, they are also more easily accessible and less well controlled. He further suggests that expressive writing that is guided to help facilitate cognitive change is useful because it helps move the traumatic memories into a more controlled, cognitive mode of memory. Pennebaker (1997b) seconds the idea that translating experiences or memories into language helps facilitate cognitive change that produces the psychological and health benefits seen from expressive writing. Several components of cognitive work during the written emotional disclosure process are thought to be useful in deriving clinical benefit.

Pennebaker (1997a) suggests that people have an innate need for completion. For example, intrusive thoughts are most likely to occur regarding unfinished events – a movie that one missed the ending of, a grocery list that hasn't been completed. Included in this need for completion is a desire to find meaning (Pennebaker). Expressive writing helps to facilitate a sense of completion, the discovery of meaning, and self understanding. Indeed, an overwhelming percentage of participants retrospectively describe the value of the expressive writing studies as increased insight (Pennebaker).

Another important process that is evidenced by the changing use of language over the course of expressive writing experiments is changed perspectives. Pennebaker (1997b) reveals that word choices in the expressive writing task can be indicative of whether an individual receives the health benefits. Specifically, using many positive emotion words (e.g., “happy”) and a moderate number of negative emotion words (e.g., “sad”) predicts health after the task. The most important predictor, however, is an increase in causal words (e.g., “because”) and insight words (e.g., “realize”) over the course of the multi-day task. Further, Pennebaker and Francis (1996) discovered that using self reflection in one’s writing (e.g., “I feel,” “I realized”) especially increased the health benefits derived from expressive writing.

An additional characteristic of writing that is psychologically and physically beneficial is the formation of a structured narrative. Foa, Molnar, and Cashman (1995) found that when traumatic events are processed (or written about) chronologically, there is less chance of serious psychiatric issues surrounding the trauma later. Pennebaker (1997b) also discusses the importance of constructing a narrative, noting that individuals who benefit most from expressive writing are those who begin with poor organized descriptions of events and move towards a more coherent narratives. Another piece of what makes a healthy narrative is that it summarizes and simplifies the experience, thus making it less overwhelming (Pennebaker, 1997a).

The degree of cognitive complexity revealed in the writing sample has also emerged as an important factor in the process of expressive writing. Pennebaker (1997a) described *level of thinking* as “a way that people track their thoughts ... High-level thinking is characterized by a broad perspective, self-reflection, and the awareness of emotion. Low-level thinking is the relative absence of these attributes....along a

continuum” (pp. 61-62). Low level thinking is useful in the short term for avoiding the pain of confronting an issue, but the flexibility to use high level thinking (e.g., during an expressive writing task) is useful in deriving the benefits of emotional disclosure.

Suedfeld and Pennebaker (1997) also found that moderate cognitive complexity (as opposed to very high or very low cognitive complexity) in written emotional disclosure was found to be most useful in terms of health benefits. So research suggests that while being overly emotional is not beneficial, nor is being overly analytical and ignoring or suppressing feelings in favor of thoughts.

Some changes that occur during expressive writing are similar to the work of Cognitive Processing Theory, an empirically supported treatment for post traumatic stress disorder (PTSD), which seeks to reduce symptoms through exposure and cognitive restructuring of the traumatic experience (Foa, Keane, & Friedman, 2000). Overall, combining all of the cognitive changes that occur, the idea is that expressive writing slows down the thinking process and gives structure to the traumatic experience. This reduces the overwhelming emotional (and typically irrational) response, allows the individual to process the event, carry the thoughts to their conclusion, and find meaning (Pennebaker, 1997a).

### Conclusion

Expressive writing, then, has a varied set of physical and psychological benefits, ranging from improved immune functioning to increased life satisfaction. The present study is most concerned with the findings that expressive writing helps to attenuate feelings of depression, anxiety, and symptoms of post-traumatic stress. It is also clear that there is not one simple mechanism by which expressive writing produces these effects.

While a complete inquiry into the nature of the many underlying mechanisms is beyond the scope of this study, the author will make use of potentially all of these change processes in combination with other experimental variables.

### Reversal Theory

Trait theories of personality are meant to discover and describe those psychological facets of person which are likely to remain stable over time and across situations (Pervin, Cervone, & John, 2005). Most often, trait theories are used to discern certain characteristics of individuals, thus gaining the ability to compare individual differences. By contrast, Reversal Theory (RT; Apter, 1989; Smith & Apter, 1975) is a *state* theory of personality. This means that (among other things) RT is concerned with how individuals are different from themselves over time and across situations (Apter, 2003b). Situational theories of personality are concerned with this, too; yet, RT also differs from situational theories of personality. While situations certainly influence the change process in how people experience and interact with the world, RT suggests that the situation is not the only predictor of stability or change (Apter). RT embraces fully the concept of human inconsistency and seeks to explain this using a model of personality that is both dynamic and structured.

### Foundation of Reversal Theory

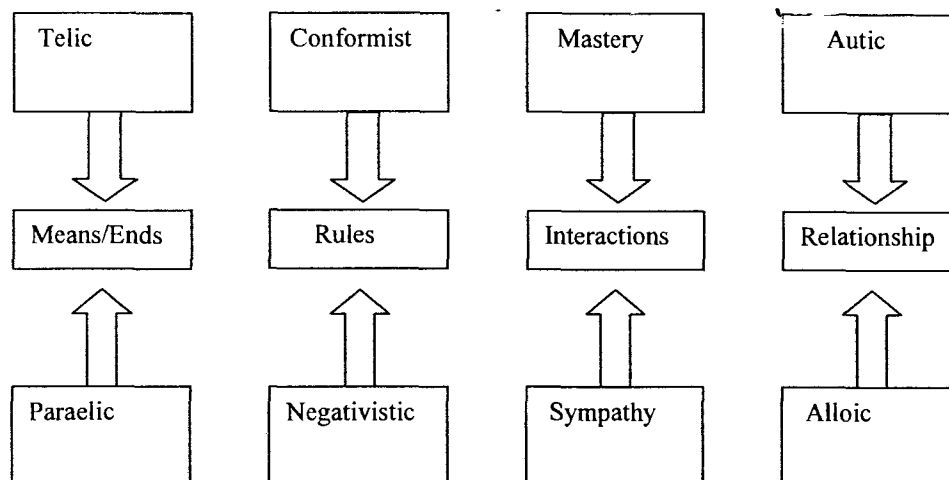
Reversal Theory's conceptual foundation is *structural phenomenology* (Apter, 1981; 2007). The phenomenological component expresses RT's concern for an individual's unique experience of the world, which sets the stage for the dynamic and intrapsychic element of the theory. However, RT does not posit that individuals are so completely unique that there is no common ground on which to understand people in

general (Apter, 2003b). The structural component expresses that each individual's unique experience of the world is underlain by certain organized principles, or can at least be understood using these principles (Apter, 2007). To better understand the concept of structural phenomenology, consider the following example. At any given moment, one's attentional focus may be outward or inward. Throughout the day, an individual's focus will certainly change. Perhaps one begins a work assignment with an external focus, but is drawn into a daydream, and then is abruptly realerted to the environment by the telephone ringing. This experience also will differ between individuals. Some will focus inwardly more often; some will have a harder time shifting between the two, etc. So, an individual's experience of attentional focus can be at least partly understood by utilizing the structure of inward/outward. Rather than being concerned with so specific construct as focus of attention, Reversal Theory applies structural phenomenology principles to a much broader construct – motivation (Apter). Though it is certainly not the only important factor in understanding human personality, motivation is essential to human emotion, mental life, and behavior.

### Structure of Reversal Theory

The structure of RT is fairly simple, and can be envisioned as a row of four light switches that you may see in a conference room (see Figure 1). Each light switch represents one of four domains of experiencing, with the two positions of the switch (up or down) representing a pair of opposing states of mind, for a total of eight states. These are termed *metamotivational states* (Apter, 2007). This term is used to indicate that the state itself is not a motivation, but a way of understanding or organizing one's motivation. Each state has a certain core motivation or value associated with it, as well as

a range of possible emotions (Apter, 2001). Also, each state has its own satisfaction that is tied to the core motivation (Apter, 2007). These concepts will become clearer as the domains and states are addressed in turn.



*Figure 1.* Metamotivational Matrix showing the two poles of each metamotivational domain. Reproduced with permission from *Motivational Styles in Everyday Life: A Guide to Reversal Theory* by M. J. Apter (2001).

### *Means/Ends Domain*

The first domain of experiencing addressed by Reversal Theory is the means/end domain. More specifically, this domain addresses whether one is absorbed in the process of what one is doing or focused on the finished product or goal (Apter, 1997a). For example, most people are focused on the end goal when paying bills, but are absorbed in the process when watching a sitcom. Or consider that, when playing a game, one may be focused on the fun of the game play (process) or be focused on winning (goal). The two states that comprise the means/ends domain are the *telic* state and the *paratelic* state. The word *telic* comes from the Greek *telos*, which means goal (Apter, 2007). One is in the telic state when he/she is goal-oriented. In the telic state, the goal takes precedence over

the activity itself and there is a future-orientation. As such, a sense of seriousness often accompanies the telic state, and a preference for low arousal (Apter). In contrast, the word *paratelic* utilizes the Greek word *para*, which means alongside (Apter). This addition is meant to indicate prime importance given not to a goal, but to the activities that go along with reaching it or involvement in an activity without a specific goal in mind (Apter, 2007). In the paratelic state, “the destination is not as important as the journey.” (Apter, 2003a, p. 3). The paratelic state is characterized by doing something for its own sake and an orientation to the present moment (Apter, 1997a). Further, the paratelic state often is marked with a sense of playfulness and a preference for high arousal (Apter, 2007). Certainly, a goal may still exist while one is in the paratelic state, but in this state the goal serves to enhance the activity. For example, when playing cards one may be quite in-the-moment and focused on the enjoyment of the act of playing, and winning only serves to make the game play more interesting. Apter (2007) suggests that if one is willing to give up the activity in exchange for already having attained the goal, then he/she is in the telic state. Conversely, if one would rather postpone the achievement of the goal in order to continue the activity, he/she is in the paratelic state.

As mentioned previously, each state has a core motivational value, a range of emotions, and certain actions typically associated with it. The core value in the telic state is achievement (Apter, 1997a). When one is in the telic state and this value is being satisfied by reaching or making progress towards one’s goals, positive emotions emerge such as relief that a goal has been met or a sense of accomplishment. When this value is frustrated by a lack of progress, more negative feelings like anxiety or a sense of being overwhelmed are often present. Actions that are common to the telic state are planning, assessing risks, thinking strategically, and working diligently (Apter, 2003a). Some

common examples of being in the telic state might be working feverishly on a project to make a deadline, studying for an upcoming exam, or decorating the house to make it presentable for the imminent arrival of one's in-laws.

The core value in the paratelic state is enjoyment (Apter, 2003a). When one is in the paratelic state and taking pleasure in his/her current activity, excitement, fascination, and interest are common feelings. When pleasure in the current activity is thwarted, however, feelings of boredom or restlessness often emerge. Common contributions made in the paratelic state are enthusiasm, openness to new experiences, spontaneity, and creativity (Apter). Examples of being in the paratelic state include walking leisurely enjoying a sunset, working on an interesting puzzle in one's free time, or luxuriating in the evening meal. It is important to note that it is not the activity that determines one's state, however. One can be walking "leisurely" at sunset in order to attain the goal of pleasing their partner, or be frustrated at the leisurely pace because he/she is focused on getting home to work on a project. Likewise, in the previous example, decorating the house may be so enjoyable that the arrival of one's in-laws may slip into the back of one's mind.

One other peculiar facet of the paratelic state should be made clear at this point. Because the paratelic state is characterized by enjoyment, it is easy to assume that one only experiences "positive" emotions (e.g., joy) in this state. However, "negative" emotions (e.g., fear, sadness) can also be experienced in the paratelic state, and when this occurs they are known as *parapathic* emotions (Apter, 2007). Unpleasant emotions can be experienced pleasantly in the paratelic state particularly when the situation allows for a *protective frame*. A protective frame exists when the emotion associated with a situation is perceived as unreal or unimportant (Apter). Consider the difference between



mourning the death of a family member and the feeling of sadness when a main character dies in a movie. The first is a real and important event and the sadness associated with it is likely experienced in the telic state. The second situation also evokes the emotion of sadness, but this sadness can be experienced pleasantly because the situation is perceived as unreal and unimportant. There are three types of protective frames: the detachment frame, the safety-zone frame, and the confidence frame (Apter, 1992). The detachment frame is exemplified in the previous example; it is present when one feels he/she is merely an observer, such as when watching a movie. The safety-zone frame exists when one feels that he/she is outside the boundaries of threat. An example of this might be the feeling of comfort that a child has when all fingers and toes are tucked away under the covers, safe from any monsters – monsters are a matter of mischief if one is within the boundaries of the comforter; they are a matter of serious import if a child has to get out of bed to get something from the closet. The confidence frame is present when one recognizes danger, but feels safe because of confidence in his/her skills, protective gear, etc. Consider an amateur rock-climber with and without a rope – with a rope, the climbing may be exhilarating, but if the rope is lost, such excitement may quickly turn to terror. The concept of parathic emotions serves to better define the telic and paratelic states. The major difference is not about positive versus negative emotions, but is better conceptualized as a difference in arousal-seeking and orientation to goals.

### *Rules Domain*

The second domain, the rules domain, is concerned with one's orientation to the rules, expectations, social norms, customs, conventions, and routines that typically structure the activities of living (Apter, 2001). For example, when one goes to church it is the custom to sit in a pew and perhaps to rise and kneel in time with the service and the

rest of the congregation. Other “rules” govern the appropriate dress, behavior, and volume of one’s singing voice that is expected at church. Sometimes such rules and routines are seen as useful or comforting, while sometimes they are seen as restrictive (Apter, 2003a). When one experiences rules as welcome and desires to be compliant, this is known as the *conformist* state (Apter, 2001). When rules are experienced as restrictive or constraining and one desires to act outside the boundaries of what is expected, he/she is in the *negativistic* state (Apter). The negativistic state is also known as the *rebellious* state (Apter, 2003a) as this term is often more easily understood. McDermott (2001) makes a distinction between *proactive* and *reactive* negativism. Proactive negativism is a playful defiance of rules or conventions for the purpose of harmless fun (McDermott). An example might be coloring one’s hair pink or cart-wheeling down the street. In contrast, reactive negativism can be destructive and is often prompted by a perceived injustice or restriction of freedom (McDermott), such as when a student disrupts class in retaliation for getting a detention slip. It is important to note that it is not one’s behavior in a situation which determines the state, but the internal experience. One may be in church and behaving “appropriately” but itching to walk out, shout “amen,” or light up a cigarette. In this case, he/she is likely in the rebellious state, despite his/her conforming behavior. Or one may be embarrassed by appearing by mistake at business-dress function in casual wear; the behavior is not consistent with the situational norms, but the experience of embarrassment indicates the conformist state.

The core motivational value of the conformist state is fitting in (Apter, 2003a). This can also be expressed as the desire to do the right thing at the right time, or to do what is typically done. In the conformist state, it is a pleasant experience when one conforms and an unpleasant experience when one is not conforming (Apter, 2007).

Pleasant emotions that may be experienced in the conformist state are a sense of belonging and comfort that one is doing right; unpleasant emotions may include embarrassment from not conforming or guilt from not meeting expectations (Apter, 2003a). Further, actions consistent with the conforming state might be following procedures, adhering to ethics, and acting predictably. Examples of being in the conformist state may be taking pleasure in a game precisely because the rules are being followed, feeling satisfied that you “belong” in a group of coworkers, or enjoying the ceremony that marks a traditional wedding, graduation, or spiritual ritual.

In contrast, the core value of the negativistic or rebellious state is freedom (Apter, 2003a). In the rebellious state, pleasure is derived by acting in way that one perceives is in opposition to external pressures or rules (Apter, 2007). Pleasant emotions experienced in the rebellious state can include independence and personal freedom, whereas unpleasant emotions may include frustration or anger at the restrictions or perceived unfairness (Apter, 2003a). Actions consistent with the negativistic state may be challenging authority, behaving critically, or showing a desire for change. The rebellious state may be manifested as defiance or (despite its name) mischievousness or simply unconventionality (Apter). Enthusiastically protesting against current legislation, purposefully acting out in a residential group home, or even “thinking outside the box” at a business meeting could be examples of being in the negativistic state. Note that the same behavior may be performed in different states, based on different motivations; smoking with school friends could be enjoyed because it is not allowed, or it could be enjoyed because it allows one to fit in with the crowd.

### *Interaction Domain*

The interaction domain deals with how one approaches and interacts in a situation, social or otherwise (though this is often best understood at first by imagining social situations). There are two primary ways of interacting – in the *mastery state*, one is concerned with power and control; in the *sympathy state*, one is concerned with nurture and intimacy (Apter, 2001). Another way to say this is to say that in the mastery state, one is most concerned with winning or losing, but in the sympathy state one is more concerned with building and maintaining relationships. Yet another way to think of this is that in the mastery state, one sees interactions more like business transactions, having to do with “taking and yielding,” and in the sympathy state, one sees interactions more like friendly or loving relationships, having to do with “giving and being given” (Apter, 1997a, p. 219).

The primary values in the mastery state are control and power (Apter, 2003a). In a social interaction, this might mean desiring to have the upper hand; in a competition, this might mean being focused on winning. One could be in the mastery state with a pet, when training it; one could be in the mastery state with a piece of machinery or sports equipment, when learning to operate it. Positive emotions felt in the mastery state include pride and accomplishment and negative emotions typically center on humiliation or disappointment (Apter). In the mastery state, positive qualities that may be displayed are confidence, determination, and leadership (Apter).

The primary values in the sympathy state are caring and affection (Apter, 2003a). Most often, the sympathy state has to do with people or living things. One could be in the sympathy state with a colleague when listening to their troubles or with a partner while sharing a casual Saturday afternoon picnic. One could certainly be sympathetic with a

pet, lavishing it with attention. In the sympathy state, positive feelings typically include loving and feeling loved; bad feelings are those that go along with feeling unloved, such as rejection (Apter). In the sympathy state, positive attributes that one may display center around cooperation, emotional support, sensitivity, and relationship (Apter).

### *Orientation Domain*

The orientation domain has to do with one's identification in a situation or relationship; that is, whether one identifies mainly with the self, seeing the self as separate and taking priority, or whether one identifies mainly with another or with a group, seeing the other as having priority (Apter, 2001). Apter (2003a) suggests these questions to help determine one's orientation in a particular situation: "Is the focus of your motivation on yourself or on others? Who do [you] care more about at this moment?" If the answer to these questions is "me," then one is said to be in the *autic state*, which comes from the Greek *auto*, meaning self (Apter, 2007). If the answer to these questions is "my wife," "my boss," "the team," "my cat," etc., then one is said to be in the *alloic state*, from the Greek *allos*, which means other (Apter). This pair is sometimes labeled as the *self state* and the *other state*, for simplicity (Apter, 2001).

In the autic state, one's primary concern is for oneself, including taking responsibility for one's actions as well as taking care to get one's needs and desires met (Apter, 2003a). Working out at the gym to see to one's health or asking a loved one to run an errand on one's behalf are examples of being in the autic state. The core motivational value in the autic state is individualism, or doing the best one can for oneself (Apter). Satisfaction at doing something well or appreciation of self may be good feelings experienced in the autic state; negative feelings such as resentment or loneliness may result if one remains in the autic state too long and thus becomes isolated from others

(Apter). Common actions in the autic state include attention seeking, performing to the best of one's ability, setting and meeting personal goals, and keeping a balance between work and personal life (Apter).

In the alloic state, one's concern is for meeting the needs or desires of others (Apter, 2003a). When one tidies up the house because their partner prefers it that way or donates time to mentor an at-risk youth, this is an example of the alloic state. The "other" in the alloic state may be an actual other, such as a friend or child. Apter (2001) also states that the "other" may also be a group or team to which one belongs, in which case it is referred to as the *extended self*. The other may also be someone or a group that one identifies with, such as a hero in a movie or a favorite sports team; in this case, the other is known as the *surrogate self* (Apter). Apter (2003a) sees the basic motive in the alloic state as collectivism, caring for others or for a group more than the self as an individual. Further, good feelings that come from helping others or seeing others succeed are a part of the alloic state, as are the bad feelings that come from letting others down or seeing others hurting. Frequently, being a good teammate, helping, encouraging, mentoring, and giving are behaviors the alloic state might produce (Apter).

#### *Combining the Interaction and Orientation Domains*

Often, it is easiest and truest to experience when the states of the latter two domains, mastery/sympathy and autic/alloic, are combined. This produces the four state combinations: autic-mastery, autic-sympathy, alloic-mastery, and alloic-sympathy (Apter, 2007). The autic-mastery state involves a feeling of desiring to be in control or have power over someone or something else. For example, pushing oneself to exercise for ten minutes longer, bargaining down to a good price with a salesperson, solving a difficult puzzle, or giving instructions to an employee. In the autic-sympathy state, one is in the

position of being cared for. This care may come from oneself or someone else. For example, being taken out to dinner, telling one's troubles to a sympathetic friend, or letting oneself off the hook from working out or running errands in favor of curling up with a comforter and a cup of hot chocolate. The alloic-mastery state involves concern for the strength, power, or mastery of others. This may take the form of following the directions of a group leader or mentoring someone less experienced to help them develop their skills. In the alloic-sympathy state, the concern is on caring for and nurturing others (though the distinction between alloic-mastery and alloic-sympathy is sometimes a fine one). Examples might be giving a gift, encouraging a friend when they are down, or taking time out to visit a lonely relative.

### The Dynamics of Reversal Theory

#### *Concurrent Experiencing and Salience*

Using the conference room light switch analogy, consider again that *all four* of the switches must be in one position or the other all the time. That is, none of the light switches cease to exist at any time. Likewise, at any given moment a person is in four of the eight states, one from each domain pair (Apter, 2001). Consider the example of frantically decorating one's house for the arrival of the in-laws. A person in this situation may be in the telic state (focused on the goal of having the house ready in time), the conformist state (hanging the decorations as they are typically hung, wreath on the door, lights on the porch), and the sympathy and alloic states (decorating because that is what the in-laws like and out of desire to have a better relationship with them). Certainly, one may be more aware of some of the domains than others in a given moment. That is, the focus of the experience may be on one or two of the current states, rather than each state

having equal focus. The relative importance or awareness of certain states is called *salience*. In the decorating example, as the time nears for the in-laws' arrival, the telic state may be much more in one's awareness than the conformist state. The perceived need for haste in completing the task may be more relevant than whether or not one is hanging the lights correctly. In this example, the means/ends domain is more salient than the rules domain. The experience of salience may well be different for different people, at different times, or with different in-laws. For example, perhaps concern for having everything prepared properly because the in-laws expect that is more important than getting everything done in time. In this case, the conformist and alloic states are the most salient, and the telic and sympathy states may have faded to the background.

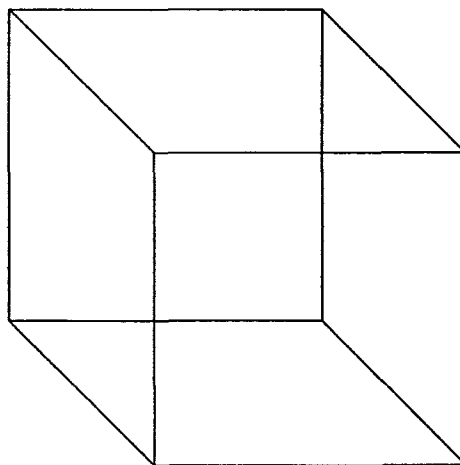
The combination of states often is most descriptive of an individual's experience (Apter, 2007). For example, engaging in a protest rally is partly satisfying because one is working towards an important goal and partly because one is breaking the norms by doing so. This would be a telic-negativistic combination that is salient. As discussed previously, it is often easiest to understand the mastery/sympathy states and the autic/alloic states when used in combination. At times, one state is important because it furthers the value or satisfaction of another state. Apter describes this by saying that "one state can be used in service to another state" (p.113). Consider an adolescent who sneaks out to vandalize (negativistic) in order to gain an experience of excitement (paratelic). So, another facet of RT's dynamism is that states may function independently or in any number of interconnected variations.

### *Bistability and Reversals*

Despite the pervasiveness of the "continuum" in current psychological thinking, the ever-present bell curve, and the call for moderation in all things, the pairs of RT states



do not operate this way. The previously presented illustration of a light switch was not chosen arbitrarily. At any given time, the light switch is positioned up or down. If pushed, it will flip to its opposite position. If not pushed hard enough, it will flip back to its original position. It does not rest in the center position. Likewise, a person is in one state of each pair or the other (Apter, 2001). This concept is called *bistability* (Apter). Bistability refers to a system which has two preferred ranges rather than one. In addition to the example of the light switch, a Necker cube (see Figure 2) is a useful visual representation of a bistable system (Apter, 2007). It can be viewed sensibly in two equal but opposite ways, but there is no intermediate position and one cannot focus on the transition between the two states because it happens too quickly. Similarly, each pair of RT states functions as a bistable system; one is either in the telic state or the paratelic state, there is no stable position in between. The movement from one state to the other has thus far been described as a change or a switch, but in RT is officially known as a *reversal*.



*Figure 2.* A Necker Cube which can be seen in opposite, yet equally stable ways.

### *Induction of Reversals*

Reversals occur in three ways. Most of the examples of reversals given thus far have been situationally-induced reversals, also called *contingent* reversals, which are the most common (Apter, 2001). A contingent reversal occurs based on an event, setting, or other environmental influence. For example, an event that is seen as threatening is likely to produce a reversal into the telic state (e.g., when one is joy-riding and then sees a police officer behind them). An event that is perceived as unfair will likely produce a reversal into the negativistic state (e.g., when a teenager is planning to go out and then is told she has been grounded). Note that it is the perception of the event which is of consequence, as events will be interpreted by different people or at different times in different ways. Another environmental factor that often produces reversals is the setting (Apter). A sports stadium may induce the paratelic state; a nursery may induce the sympathy state; an employer's office may induce the telic state. Any situational event (e.g., seeing one's partner smile, feeling nauseous, music playing in the background) can prompt a state reversal. Often, the combination of many situational factors in balance determines the state one is in (Apter). For example, one may be drinking cocktails and watching football with friends (all paratelic-inducing for the individual) and see a spider (typically a telic-inducing event), but not be moved from the paratelic state due to the influence of the aforementioned factors. In essence, the perceived situational factors may be viewed as if on a scale, or a see-saw. Situational factors may "add up" enough to tip the internal see-saw to the opposite state, or the opposing factors may not be weighty enough, in which case the individual remains in the state he/she is in.

Another way that reversals are induced is through *frustration* (Apter, 2001). As noted previously, each state has certain kinds of satisfaction embedded within it. When

this satisfaction is not achieved over a period of time (which varies across times and individuals), the frustration will lead to a reversal (Apter). An example of this type of reversing is when, in the telic state, one does not feel they are making progress, cannot bring down their level of arousal, or comes to feel that what they are working toward is not worthwhile. A reversal to the paratelic state may take the form of abandoning the project in favor of something fun or distracting oneself with humor. Frustration-induced reversals may occur in the alloic sympathy state when one has heard quite enough of another's complaining, in the negativistic state when one realizes that his/her efforts to change the system are not fruitful, or in the mastery state when one becomes exhausted with running on the treadmill.

The final factor in inducing reversals is known as *satiation*. This is hypothesized to be an internal mechanism in which a reversal is induced after a certain amount of time even when one is receiving the satisfactions of the state and in the absence of situational changes (Apter & Smith, 1985). Consider the student or retiree who, after a few hours, days, or weeks of leisure, longs for work. After a time, a loving caregiver who is content to nurture those in her household spontaneously craves some time for herself. Blackmore and Murgatroyd (1980) describe a young girl who would act out and disrupt her class at school, often at predictable times, but also at seemingly random times without provocation. The process of reversing through satiation is often compared to the sleep-wake cycle, wherein the body simply recognizes that it has had enough of a certain natural and satisfying state, for reasons that are not entirely clear (Apter, 2007).

In the same way one cannot simply decide to feel a certain emotion, reversing is not volitional (Apter, 2007). However, as with changing emotions, there are techniques available that can help to induce a reversal. Such techniques include manipulating the

situational variables changing behaviors, changing cognitions, conditioning states, creating rituals, and using imagery (Apter, 2003a). The most effective technique is to change the circumstances if possible; especially effective is to leave and go somewhere else. However, that is often not an option. In that case, changing one's own behavior is often an effective inducer (Apter). This may mean telling a joke in the telic state, giving a gift in the autic mastery state, or making a special effort to conform in the negativistic state. This technique is epitomized by the saying, "Fake it 'til you make it." Another option is to change one's thoughts by reframing the situation (Apter). Looking for humor in the situation may induce a reversal to the paratelic state; counting one's blessings may induce a reversal out of self sympathy. It is possible to induce a reversal by conditioning states to certain objects or thoughts (Apter). For example, carrying a ribbon won in a competition may induce the mastery state or a picture of one's partner may induce the sympathy state. Similarly, states can be conditioned by certain rituals, such as the pre-performance rituals of athletes or public speakers (Apter, 2007). Imagery can also be useful in a similar way, such as the husband who mentally leaves his work-related worries in the mailbox before going home to his family.

A specific form of imagery created for use with Reversal Theory is worth particular mention. It is called the Eight Rooms technique and has been used in several applied settings (Apter, 2006, personal communication). In the Eight Rooms technique, an individual or group is instructed by a leader in a guided imagery session. The participants envision a hallway with eight rooms, four on each side. Each pair of rooms represents a pair of RT states. The participants are instructed to enter each room and fill it with colors, objects, scents, memories, and anything that helps to define each state for them. For example, a telic room may have paneling on the walls, a large clock, diplomas,

and a work desk. A paratelic room may have brightly painted walls, a hammock, a tiki bar, loud music, and a bubble-machine. The participants are instructed to use as many senses as possible and not to limit themselves to ordinary furniture or objects. They are encouraged that, after the guided imagery, they will be able to use their memory of each room in order to induce the state desired at the time. Of particular interest are the findings of Charat (2006), who used the Eight Rooms technique as part of a smoking cessation program in one of the first studies utilizing the technique to gain clinical benefit. He found that not only did participants smoke less after have been taught the technique, but also had lower anxiety and depression scores. This demonstrates the potential usefulness of the Eight Rooms technique in clinical settings.

### *Individual Differences*

A caveat was mentioned early in the discussion of Reversal Theory that, while RT is primarily concerned with intrapersonal change, it does not dismiss the very real presence of individual differences. Two main areas in which people differ in a trait-like fashion are known in RT as *dominance* and *lability* (Apter, 2001). Dominance is defined as an internal bias towards one or the other state in a pair (Apter). For example, an individual can be telic-dominant, meaning that, cumulatively, he/she spends more time in the telic state. Indeed, there are a number of important differences that appear to stem from telic or paratelic dominance, some of which will be described in more detail in a later section. One such difference, discovered by Svebak and Murgatroyd (1985) is that telic-dominant individuals are more likely to carefully plan their daily activities, engage in more self-monitoring, and spend more time making progress towards long term goals. In contrast, paratelic-dominant individuals are likely to be involved in a greater variety of activities, to be less organized, and to exhibit more spontaneity and adaptability than

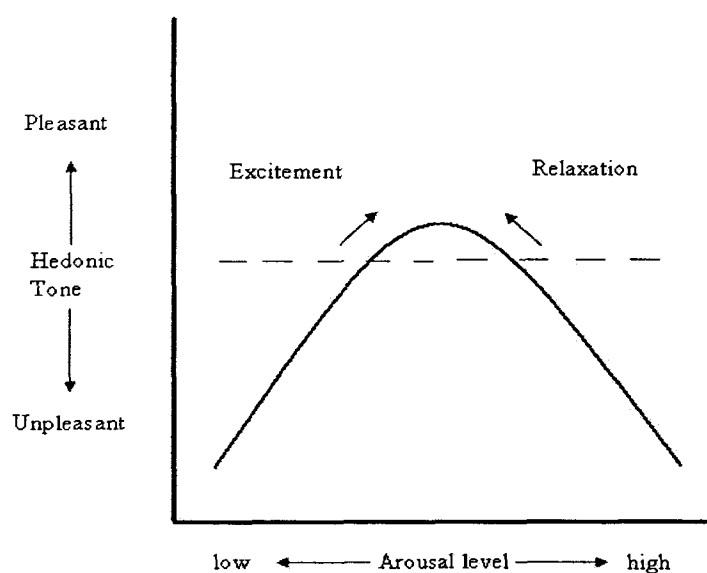
telic-dominant individuals. Paratelic-dominant people are more likely to indulge in a greater variety of sexual behaviors (Murgatroyd, 1985). Certain behaviors, such as regular gambling (Anderson & Brown, 1987) and drug addiction (Loonis, Apter, & Stultzman, 2000) are also more likely occur in paratelic-dominant individuals. The telic/paratelic domain is the most studied in terms of dominance and its sequelae, however, the concept of dominance certainly extends to all four domains.

The second individual difference often discussed in RT is the concept of lability. Lability describes how easily and frequently one reverses (Apter, 2001). Frey (1997) suggests that reversals typically occur every few hours, but this varies from person to person. Two people who spend the same amount of time in each state (similar in dominance), for example, may reverse at different rates, with one person spending longer periods continuously in one state and reversing fewer times throughout the day. So, a person high in lability is one who reverses without as much provocation and who reverses more often. In addition to these primary differences in experiencing, there are many more ways in which people may differ systematically from one another. For example, people differ in the strategies they use or prefer to use in gaining state satisfactions (Apter, 2007), in terms of which states are typically more salient for them (Apter), and in level of arousability (Apter, 2001). More of these individual differences and their impact on experience continue to be a robust part of the RT research field.

### Reversal Theory as a Theory of Motivation

Because RT is concerned with the whole range of human experience, the concept of motivation makes the perfect core construct. RT examines motivation in a way that is unlike any other theory of motivation (e.g., drive reduction theory, optimal arousal

theory) in part because it honors the vagaries of human motivation. Rather than assert that there are a certain set of human drives (e.g., hunger) or motivations (e.g., approval) and that people must struggle to obtain a certain favorable level of these drives, RT posits that human motivation is unendingly varied and constantly changing as a result of intrapsychic factors and in response to external pressures and resources (Apter, 2007). To illustrate this point, consider optimal arousal theory, which posits that too low or too high a level of arousal is inherently unpleasant (Hebb, 1955; see Figure 3).



*Figure 3.* Hebb's (1955) arousal curve showing the relationship between arousal and hedonic tone according to optimal arousal theory (Hebb, 1955). Reproduced with permission from *Reversal Theory: The Dynamics of Motivation, Emotion, and Personality* by M.J. Apter (2007).

Then consider the pleasant high level arousal experienced during a scary movie or sports event. Also consider the pleasant low level of arousal experienced lying in a

hammock on vacation or snuggling up on a chill night to simply watch the fire. These common human experiences contradict optimal arousal theory, indicating that there is more to be explained.

Reversal Theory explains these and other experiences of arousal through the lens of the telic/paratelic domain (the following discussion is derived primarily from Apter, 2001 and Apter, 2007). RT suggests that there are four basic, independent emotions that exist in the realm of arousal: excitement, boredom, relaxation, and anxiety. Excitement and relaxation are both typically pleasant emotions, and this overall sense of pleasant experiencing can be called a pleasant *hedonic tone*. Boredom and anxiety are both typically disagreeable emotions, and thus are characterized by unpleasant hedonic tone. Further, excitement and boredom have something in common – they are both emotions concerned with arousal-seeking. When one is excited, arousal is high and the individual is pleased; when one is bored, arousal is low and the individual wishes there were something to create some excitement. Likewise, anxiety and relaxation are both concerned with arousal-reduction. When relaxed, one is glad for the low level of arousal; when anxious, one wishes for the arousal to decrease. Taking these characteristics all together, these four arousal-related emotions can be plotted in quite an intuitive way (see Figure 4a).

In examining Figure 4, recall the nature of the telic and paratelic states. In the telic state, high arousal is experienced as unpleasant, in the form of anxiety (e.g., worry over meeting a deadline), while low arousal is experienced as pleasant, in the form of relaxation (e.g., relief that goals have been met). In the paratelic state, high arousal is experienced as pleasant (e.g., excitement at attending a sporting event) and low arousal is experienced as unpleasant (e.g., boredom while waiting in line). Of course, there are



variations on each of these primary emotions that indicate the strength of the emotion, for example, from interest to elation (variants on excitement) or from concern to terror (variants on anxiety). Note how Figure 4a shows that low levels of an emotion vary consistently with arousal. For example, concern would fall on the graph somewhere nearer to the middle, with little arousal and little unpleasant hedonic tone. However, terror would fall on the graph very near the corner, with a great deal of both arousal and unpleasant hedonic tone. Thus, RT explains these emotions in a way that fits human experiencing more closely than optimal arousal theory, by placing all four emotions in “opposite corners” along the two lines of telic and paratelic.

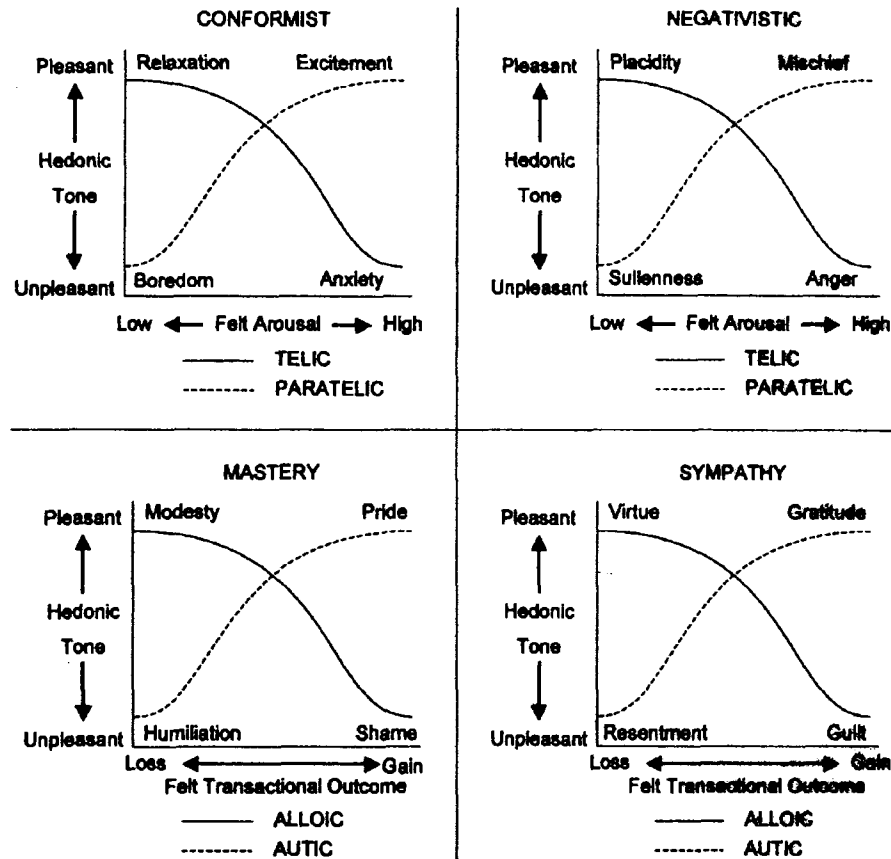


Figure 4. Reversal Theory “butterfly curves” representing the contrasting ways in which emotions are experienced in different metamotivational state combinations. Reproduced with permission from *Motivational Styles in Everyday Life: A Guide to Reversal Theory* by M. J. Apter (2001).

Similar graphs can illustrate the other three pairs of states as well, and they are often better understood in combination rather than alone. While figure 4a shows the telic and paratelic states from a conformist perspective, figure 4b is the negativistic illustration. Note that high arousal is marked by mischief (playful) on the paratelic line and in the pleasant area of the graph, but marked by anger (serious) on the telic line in the unpleasant area of the graph. Also, note that placidity and sullenness mark the low ends of arousal, with placidity being pleasant (on the telic line) and sullenness being

unpleasant (on the paratelic line). The mastery (Figure 4c) and sympathy (Figure 4d) states are represented in combination with the autic and alloic states. These graphs show the continuum of hedonic tone matched with a continuum called *transactional gain*, or the feeling of gaining or losing in a transaction, whether a competitive or relationship-oriented transaction. On the mastery graph, pleasant gaining is characterized by pride while pleasant losing is characterized by modesty; unpleasant gaining carries the emotion of shame and unpleasant losing the emotion of humiliation. Pride and humiliation fall along the autic line, while modesty and shame fall along the alloic line. On the sympathy graph, the autic line is marked by gratitude (pleasant gain) and resentment (unpleasant loss). The alloic line is marked by virtue (pleasant loss) and guilt (unpleasant gain).

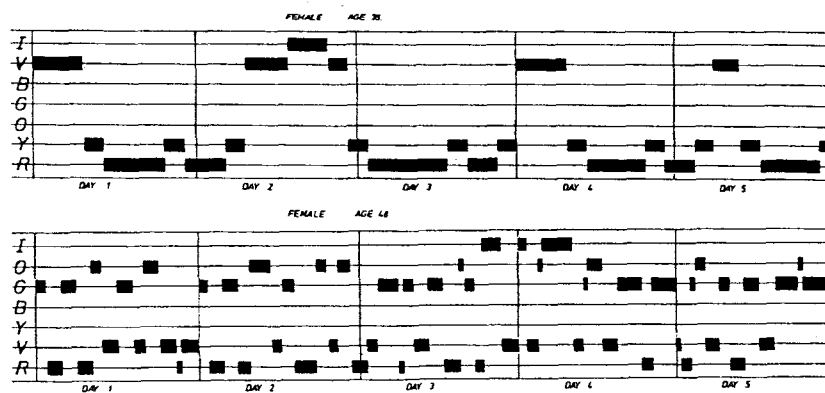
While complex, the concepts illustrated in these graphs are fairly intuitive in human experiencing. Changes in emotion may be experienced by a change in arousal or transactional gain or they may change as a result in the shift in *motivation* – a reversal. To exemplify these reversals, consider the following situations. In a sexual encounter, a man may be quite excited but when he considers the importance of his performance, his motivation becomes goal-oriented and he experiences anxiety (conforming state with a reversal from paratelic to telic). An adolescent is sitting placidly in church, but when a friend text-messages her from the mall she reacts with sullenness instead (negativistic state with a reversal from telic to paratelic). A boy is winning in a round-robin chess competition and feeling quite proud of himself until he is placed at a table with his younger brother whom he has been coaching and suddenly feels it would be better to lose (mastery state with a reversal from autic to alloic). A woman is lamenting with a friend in a coffee shop and is glad to have someone listen to her rather inconsequential troubles. Then, her friend mentions that something terrible recently happened to her and the

woman begins to feel guilty for talking about herself so much (sympathy state with a reversal from autic to alloic). These situational examples can help extrapolate the seemingly abstract information presented in graph format into something more concrete and recognizable.

### Select Research Support

#### *The Experience of Reversing*

In working to validate the concepts of Reversal Theory, especially the concepts of bistability and reversals, new research paradigms often were invented. A classic study demonstrating reversals and bistability was performed by Walters, Apter, and Svebak (1982). In this study, office workers were asked to rate seven colors (red, orange, yellow, green, blue, indigo, and violet) in terms of how arousing the colors were to them. Then, at fifteen minute intervals over the course of several work days, the workers were asked to select which color best represented their current arousal preference. The results confirmed the existence of the telic and paratelic states. Additionally, the clearly bistable pattern (see Figure 5) supports the concept of bistability, reversals, and the notion that both states cannot be experienced simultaneously



*Figure 5.* Bi-stable pattern of arousal preferences showing the color preferences (arousal preferences) of two participants over the course of five days. Reproduced with permission from *Motivational Styles in Everyday Life: A Guide to Reversal Theory* by M. J. Apter (2001).

In addition, the telic and paratelic states (by far the most researched state pair to date) are marked by psychophysiological differences. A landmark set of studies (Apter & Svebak, 1986; Svebak, 1982; 1984; 1986; Svebak & Murgatroyd, 1986; Svebak, Storfjell, & Dalen, 1982) involved participants recruited based on telic and paratelic dominance scores playing computerized car-racing in which the objective was to avoid crashes. Over the course of these studies, a robust finding emerged – that in the telic state (and in telic-dominant individuals), muscle tension was higher (in muscles unrelated to the task), heart rate was faster, and breathing was faster and deeper. In other studies, differences in telic- and paratelic-dominant individuals' cortical activity have also been found (Svebak, 1982; 1985).

#### *Induction of Reversals*

Situation-induced reversals have been studied both naturalistically and experimentally. Apter (1997b) interviewed members of parachuting clubs and found that

the highest anxiety level occurred just before the parachute opened, and the highest excitement level occurred just after the parachute opened. This is an example of a telic to paratelic reversal contingent on a change in perception from danger to safety. Kerr, Kawaguchi, Oiwa, Terayama, and Zukawa (2000) found similar results in interviews of dancers, who indicated that the highest anxiety was experienced as they were called onto stage and that this transformed rapidly into excitement as the dancing began.

Kerr and Tacon (1999; 2000) demonstrated that different settings and activities can induce certain states. For example, students tend to experience the telic state in a lecture hall and the paratelic state in a university sports center. Students also experienced reversals from telic to paratelic when they were given an unexpected break during a lecture. In addition, researchers have manipulated participants' states directly, inducing the telic state through threat of electric shock and the inducing the paratelic state by having participants watch a comedy show (Apter, 2007).

The classic work on frustration-induced reversals was performed by Barr, McDermott, and Evans (1993). This study involved attempting to put together a very difficult puzzle (with no time constraints), which is an activity that may be alternately experienced as a game or a task. Most of the participants experienced a reversal during the activity (telic/paratelic). Those who began the task in the paratelic state reported more boredom upon finishing; those who began in the telic state reported more frustration. Another interesting finding was that those who began in the paratelic state spent more than twice as long working on the puzzle as those who started in the telic state. Unexpectedly, some of the participants successfully completed the puzzle. These participants indicated that they did not experience a reversal during the activity. This further supports the idea that frustration was the cause of the reversals that did occur

among those participants who did not complete the puzzle. Other studies have found similar reversals based on frustration (Hudson & Bates, 2000; Purcell, 1999).

Perhaps the most obscure type of induction is satiation-induced. It requires special experimental set-ups to study, like those of Lafreniere, Cowles, and Apter (1988). In this landmark study, participants were given freedom to utilize either of two computer programs in a controlled environment. One program was a statistics teaching program (ostensibly telic) and the other was a video game (ostensibly paratelic). During the experiment, with no extraneous stimuli to set off a contingent reversal, the average number of reversals was 2.9 (with a range of 0-9) in the two hour time period. Post-experiment interviews confirmed that most of the switches were consistent with satiation-induced state reversals.

#### *State Dominance*

Svebak and Murgatroyd's (1985) "day-in-the-life" studies give a rich picture of state dominances from a qualitative research perspective. Twenty subjects, chosen for extreme telic and paratelic dominance scores, were interviewed about their daily life activities. Descriptions of the previous day from telic-dominant individuals were marked by carefully planned activities, a good deal of self-monitoring, and evident goal-orientation. Typically, they were delivered chronologically, with precision, and with a large amount of detail. In contrast, the paratelic-dominant descriptions included a greater variety of activities, less organized activities, and more spontaneity. Further, they were typically delivered in an impressionistic manner, generalized, sometimes non-chronologically, and marked by exaggeration. Similar studies were conducted by McDermott (1988) examining conformist and negativistic dominance. Conformist-dominant participants tended to approach the interview task systematically and were

polite and answered questions to the best of their ability. They also described more conformist behaviors, such as studying. Negativistic-dominant participants were more likely to be disruptive to the interview task, to answer questions only briefly or refuse to answer, and to display sarcasm, in addition to describing more rebellious and unconventional activities.

## Clinical Applications

### *Conceptualization*

In addition to the research and theoretical value thus far described, Reversal Theory has much to offer the mental health field in the clinical arena. One major contribution is a unique framework for conceptualizing and treating mental disorders. Many of the most common neurotic complaints (e.g., depression, anxiety) can be analyzed and understood from a RT perspective as either problems reversing between states or problems gaining the satisfaction within a state (Apter, 2007). This way of looking at presenting issues can give an eclectic therapist structure in understanding a client's issues and direction in selecting treatments, and even offer alternatives to traditional therapies.

To elucidate RT's method for conceptualizing mental disorders, each type of state-related difficulty will be described in turn. There are two types of *structural disturbances*, or between-state problems (Apter, 2007). The first is *inhibited reversal*, in which one is "stuck" in one state and has difficulty reversing or spending much time in the opposite state (Apter). This does not imply that dominance is inherently bad or that all states should be utilized in equal measure, but that there should be some balance in that all the states are indeed experienced and one or some are not absent (or nearly absent) from



one's repertoire. The classic example (described in Apter, 2007) of inhibited reversal is the client with chronic anxiety. A client with this presenting issue can be conceptualized as a client who is stuck in the telic state, with most events and most internal cues perceived as threatening, a constant future orientation marked by worry, and an ever-present preference for the current moment to be past in favor of having the present situation (and its attendant anxiety) eliminated.

The second between-state problem is *inappropriate reversal*, wherein the individual reverses into a state that is not fitting for the situation and thus causes distress (Apter). To illustrate this, consider a client with panic disorder, who not only panics in response to legitimately threatening stimuli, but anytime she becomes aroused, whether in response to getting into an elevator or seeing her favorite sports team win. In this case, the client reverses into the telic state in situations that at the very least do not call for preparation to meet the demands of a threat and usually cannot be properly enjoyed in the telic state.

Other contributors to psychopathology are maladaptive strategies aimed at achieving the satisfaction from a state, but that end up causing unnecessary distress (Apter, 2007). The first of these are known as *functionally inappropriate* strategies, which are attempts to reach the satisfaction of a state that do not end in receiving the satisfaction (Lafreniere, Ledgerwood, & Murgatroyd, 2001). For example, someone acts out criminally in the negativistic state only to be taken to prison where the opportunities for negativism are much fewer or the client with panic disorder worries herself into the very thing she fears, a panic attack. The second of these are called *temporally inappropriate* strategies; these strategies gain satisfaction in the short term only to cause problems later on (Lafreniere, Ledgerwood, & Murgatroyd). Often performed in the

paratelic state, examples include gambling (Brown, 1988) and risky sexual behavior (Gerkovich, 1997). These activities provide immediate enjoyment, but usually have unintended and unpleasant consequences, such as the accumulation of debt or sexually transmitted diseases. The third set of maladaptive strategies are known as *socially inappropriate* strategies, which may or may not cause distress to the individual, but certainly cause distress to important others (Lafreniere, Ledgerwood, & Murgatroyd). An example of this may be acting out behavior that is pleasurable to a child, but viewed with distress by parents and teachers. These five difficulties can, alone or in combination, account for any number of mental and personality disorders, and help therapists reframe client behaviors in a useful way for treatment.

#### *Clinical Presentations Described in Reversal Theory Terms*

Many of the most common presenting issues or diagnostic categories can be described using the state-related dysfunctions just mentioned. This section will elucidate some of these common client issues including depressive disorders, anxiety disorders, acting out and antisocial behavior, sexual dysfunction, and interpersonal difficulties.

Clinicians recognize that depression presents in myriad forms, and the DSM-IV-TR (American Psychiatric Association, 2000) confirms this supposition with its many accompanying specifiers (e.g., with atypical features, with melancholic features). Apter (1989) suggests that depression comes from a sense of helplessness about achieving satisfaction, and that there may be a different presentation of depression for each RT state. For example, Murgatroyd (1987) discusses two types of depression that stem from the telic state. “Anxious” depression is marked by the additional presence of anxiety symptoms, and is posited to be an expression of a high level of arousal in the telic state (creating anxiety) and a feeling of helplessness to reduce the anxiety either through

relaxation or reversing in to the paratelic state (Murgatroyd). “Apathetic” depression is marked by an inability to experience arousal and is characterized by lethargy and blunted affect; this type of depression can be understood as the opposite telic problem – a lack of arousal in the telic state that is so overwhelming, one cannot get motivated to pursue any worthwhile goals (Murgatroyd). A helplessness to achieve satisfaction in the paratelic state may present as a “bored” depression, where one cannot attain the desired level of excitement; this may also present as an “overexcited” depression (e.g., a mixed mood episode, or a “dysphoric mania”), in which one feels chronically overexcited and unable to escape (Apter, 2001). Other examples of state-dependent depressions would be a depression that presents with themes of the inability to escape external/social pressures (negativistic), excessive guilt over not being able to live up to others’ expectations (conformist), or a sense of worthlessness (autic sympathy) (Apter, 1989). This approach implies that different presentations of depression may respond better to various treatments, and that some treatments will be effective for certain presentations but not for others.

RT constructs explain three types of anxiety disorders particularly well: chronic anxiety, phobia, and obsessive-compulsive disorder. Chronic anxiety, mentioned earlier, can be understood as being “stuck” in the telic state (inhibited reversal) and unable to modulate one’s level of arousal (Apter, 1982). The two conditions, therefore, which make chronic anxiety (or trait anxiety) more likely are telic dominance and high arousability. Indeed, Lafreniere, Gillies, Cowles, and Toner (1993) found that this combination of personality traits was linked to high trait anxiety, but not high state anxiety, which supports this conceptualization of chronic anxiety. Also characterized by high telic dominance is obsession, marked by rigidity and seriousness, whether in the form of

obsessive-compulsive disorder or obsessive compulsive personality (Apter, 2001). Obsessions in general are an example of a functionally inappropriate strategy because the adherence to rules and rituals may inadvertently divert one from pursuing and achieving more significant goals (Apter, 1982). Obsessionality can also reflect inappropriate reversals. In the case of obsessive-compulsive disorder (characterized by obsessive *symptoms*), a telic dominance accompanies reversals that are underinhibited, meaning that reversals happen very quickly (Fontana, 1981). In contrast, in obsessive-compulsive personality (characterized by obsessive *traits*), there is the presence of telic dominance with overly inhibited reversals, with extreme difficulty reversing into the paratelic state (Fontana). Phobias can be understood as a reversal to the telic state in reaction to a stimulus that would not ordinarily warrant such a reversal (inappropriate reversal) (Apter, 1982). This is sometimes compounded by additional anxiety, sometimes known as fear-of-fear (e.g., Foa, Steketee, & Young, 1984) which in turn induces panic. Fear-of-fear is another example of a functionally inappropriate strategy; it is a response to the initial anxiety, but rather than inducing a reduction in arousal or a reversal to the paratelic state, it increases anxiety further (Apter).

Acting out behavior, from classroom disruptiveness to outright delinquency (e.g., vandalism), can be described as inhibited reversal out of the paratelic state (Apter, 1990). Indeed, telic dominance scores for delinquent boys (defined as boys who had experience with the criminal justice system), disruptive boys (defined as boys labeled by teachers as disruptive in the classroom), and control group boys showed an illuminating pattern. Bowers (1985) found that delinquent boys had the lowest telic dominance and control group boys had the highest, with disruptive boys in the middle. Additionally, delinquency is also marked by a tendency to combine the paratelic state with the negativistic and

mastery states. In this state combination, socially inappropriate strategies are the mode of choice for inducing excitement, and temporally inappropriate strategies (e.g., substance abuse) are also used often (Kerr, 1994). Bowers further suggested that treatment strategies aimed at reducing delinquency focus on managing low arousal and finding appropriate ways to experience paratelic excitement.

Antisocial behavior is sometimes misinterpreted as adult delinquency behavior, but individuals with antisocial personality disorder (i.e., “psychopaths”) are not significantly more paratelic-dominant than controls (Thomas-Peter & McDonagh, 1988). Instead, psychopathic criminal offenders are more negativistic-dominant than both controls and other criminal offenders (Thomas-Peter, 1993). In addition, Thomas-Peter (1996) suggests that the hypothetical curves (refer to Figure 4) for psychopaths dip down in the center, symbolizing that psychopaths readily experience negative emotions and have difficulty experiencing positive emotions.

A variety of sexual disorders can be conceptualized through Reversal Theory, particularly via the means/ends domain. Consider the myriad variations of sexual dysfunction (e.g., erectile dysfunction, anorgasmia, arousal disorders). A pleasurable sexual experience by definition occurs in the paratelic state, but when a reversal occurs, the sexual excitement felt in the paratelic state is then experienced as anxiety in the telic state, which is contrary to sexual responsiveness (Apter, 1982). Inappropriate reversals into the telic state may occur for a number of reasons, including perceived threat (e.g., worry about getting caught or unwanted pregnancy), being focused on a goal rather than enjoyment of the here-and-now (e.g., trying to conceive, trying to orgasm), or a sense of obligation (Frey, 1991). Paraphilias (e.g., masochism, exhibitionism) may be understood as an individual who is unable to achieve paratelic excitement in socially appropriate

sexual encounters. These individuals will then turn to novel or unusual methods of stimulation, some of which may be socially inappropriate (Apter). Further, some paraphilias combine the need for extreme arousal in the paratelic state with other states, such as the mastery state (e.g., sadism) or the negativistic state (e.g., frotteurism).

Many instances of interpersonal difficulty may be explained by either state incompatibilities or the use of state-inappropriate strategies (Apter, 2001). Consider this common scenario: A child (in the paratelic state) is craving excitement, while her parent perceives her boisterous activity as a stressor in the telic state and seeks to settle the child down. The child experiences boredom (because she is still in the paratelic state) and begins to look for other ways to satisfy her excitement craving, which further aggravates the parent. In this case, the incongruence of the two individuals' states caused, or at least significantly contributed to, the interpersonal distress. Further, consider the household that struggles continuously between the telic-dominant father and the paratelic-dominant mother. Examples of inappropriate strategies causing interpersonal problems are the spouse who looks outside the marriage for sexual excitement in the paratelic state, domestic violence in the mastery state, or the willingness to be taken advantage of in the alloic-mastery state combination (Apter). The examination of incompatible states and dominances and inappropriate strategies can be of use in exploring any relationship dynamic – couples, families, friends, coworkers, even the therapist-client relationship.

### *Treatment Planning*

Among the benefits to viewing mental disorders through the RT lens is the direction offered in treatment planning (Apter, 2007). Recognizing a client's maladaptive reversing patterns or strategies can help in identifying specific goals (e.g., to experience pleasant arousal in the paratelic state) and thus planning treatment, regardless of

theoretical orientation. RT may even offer different avenues for treatment than may be typically suggested. For example, anxiety is most often treated using some type of relaxation therapy, and being relaxed rather than anxious in the telic state is certainly therapeutic progress. However, RT suggests that, in addition to relaxation, the client needs to be able to experience excitement as well, and so additional strategies may be used in therapy in order to promote paratelic reversals. A RT perspective may also help a therapist determine when to utilize certain strategies to best effect change. For example, it may be more useful to use a joining technique with a negativistic teenager rather than a lecture on the value of propriety. Or a therapist may recognize the need to lighten the therapeutic mood by using humor before attempting a paratelic-based technique. Reversal Theory thus gives a more dynamic and perhaps more useful way of conceptualizing and interacting with clients than other theories, while remaining accommodating enough to be used by therapists of any theoretical orientation.

#### *Definition of Mental Health*

A second major contribution to the mental health field is a new conceptualization of what mental health means. Popular in both the professional and lay communities is the idea that mental *stability* equates to mental health. However, Reversal Theory posits precisely the opposite, that people are healthiest when they exhibit the fluidity to be able to experience satisfaction in all eight states at appropriate times. Apter (2007) states the following:

The reversal theory view is that a certain kind of instability is essential for a full and happy life: one should be able to pursue the satisfactions of serious achievement, but also at other times the more frivolous joys of play; one should be able to feel the warm agreeableness of being a “good citizen,” but also from time to time the keen pleasures of

defiance and independence; one should be able to experience the pride of personal strength as well as, on other occasions, the comforts of modest humility (p.187).

This ability to experience all of the states and their attendant satisfactions is known as *psychodiversity* (Apter, 2001). Combined with an adequate frustration tolerance, a functioning internal measure of satiation, and the ability to respond effectively to situational factors, including other people, psychodiversity defines what it means to be healthy – to be able to work, love, and play effectively.



## CHAPTER TWO

### PILOT STUDY

#### Justification

The author and colleagues posited that by combining the empirically supported theories that explain the benefits gained by expressive writing and the theoretical tenets of Reversal Theory, several potential areas for increased clinical benefit would emerge. All of these were supported by the pilot results, which are discussed in the next section.

First, because the basic format of the Pennebaker writing paradigm is maintained, the author believed that the benefits associated with emotional disclosure as a result of decreased inhibition should also be maintained. This is facilitated even more by the first day of writing, which employs the precise expressive writing instructions. Additionally, gains were expected as a result of the habituation to the memory of the traumatic event simply due to exposure (Foa, Molnar, & Cashman, 1995). However, the author suggested that when one is remembering a traumatic event it is likely that the memory acts as a trigger to elicit certain RT states. By incorporating methods which allow the participant to be exposed to the traumatic memory in each RT state, the author expected that even further gains can be expected by experiencing a broader range of emotions and cognitions during the habituation. The opportunity to experience the traumatic in memory in previously ignored states may also induce broader perspective or increased insight.

Further, the author believed that the RT framework would allow the participants to experience greater breadth and depth in cognition during the writing tasks and give the

participants a new way of structuring their experience. These factors may help to facilitate the transition from affective and sensory memory to a more controlled, cognitive style of memory described by Gidron (2002). Also, the structure of the RT prompts may encourage the self reflection and high level thinking that are noted as beneficial in expressive writing (Pennebaker & Francis, 1996; Pennebaker, 1997a). Finally, Charat's (2006) findings regarding lowered anxiety and depression following the use of the Eight Rooms technique in a smoking cessation program indicate that even further benefit may be expected.

### Method

A small pilot study ( $n = 12$ ) was run in the summer of 2007 in order to test the proposed Reversal Theory experimental group procedures and gain qualitative information about the value of the tasks. The participants were undergraduate psychology students enrolled in summer classes. The procedure was tested over 5 days. Participants signed informed consent documents and were exposed to a short lecture on the basic tenets of RT. They performed one 20-minute expressive writing task and the Eight Rooms guided imagery task (including the use of note cards). There were two 20 minute writing tasks that utilized the RT prompts. The last day of the study, the participants answered several open-ended questions about the RT procedures and to compare the two types of writing.

### Results

Overall, the pilot study was successful in that useful information was gained regarding both the quality of the methodology and the value of the study in terms of the theories previously presented. All of the procedural elements were supported as useful

and manageable by the participants. Further, each of the theoretical underpinnings (inhibition/disclosure, habituation, and cognitive structure) was also mentioned spontaneously in the answers received. Below is a summary of the qualitative support for the RT procedures and the theoretical basis for using RT with expressive writing.

### Procedures

(1) The participants as a whole appreciated *both* forms of writing and the balance between the expressive and RT writing tasks, and 12/12 said there was something useful about each type. Based on these responses, the present study includes one day of expressive writing and two days of RT writing to maximize benefits.

(2) The multiple forms of RT exposure were supported by follow-up comments. Each exposure (lecture, notecards, guided imagery, state prompts) was individually and collectively mentioned as being important to the participants' understanding and increasing their ease in getting into the states. The 8 rooms guided imagery was particularly well-regarded; 11/12 participants indicated that it was enjoyable and helpful.

(3) The majority of participants indicated that 5-6 minutes per state was exactly the "right" amount of time for the RT writing. As a group they indicated that 20 minutes was adequate for the EW task and that the length of the guided imagery was also adequate. Based on these data, the task lengths are retained in the present study.

(4) One comment was that having the instruction, guided imagery, and writing days closer together (every day) would have been better, which was not workable for the pilot (which was every other day, coinciding with class days). This was a change that was made to the method of the present study.

(5) Some participants indicated being in states other than the requested state after the RT writing. This is an indicator that they understood the states and were able to recognize which one they were in and that the prompts do not infallibly elicit the desired state. For this reason, the post-writing questionnaire will be retained in the RT group in order to get an accurate accounting of which states were experienced.

(6) The participants noted that being in a group setting was not problematic, and indicated a perception of privacy due to the seating arrangement (sitting in a circle facing the walls). Two of the twelve said that writing individually would have made them feel safer in writing more freely or in getting into the states more fully. Based on these results, the group format and room arrangement are retained for the present study.

(7) Of interest, when asked which state was most and least helpful, there was a great deal of variety, with 6/8 states being rated as most helpful by at least one participant (not paratelic or conforming), and 7/8 as least helpful (not telic).

### Theoretical Groundwork

The four elements of theory suspected to underlie change in the study were mentioned spontaneously by the participants in the open-ended follow-up. These elements are enumerated below and supported by comments taken from the questionnaire in answer to the question: “Compare/contrasts the two writing tasks in whatever way you wish.”

Reduced inhibition/emotional disclosure was noted during the EW task: “The 1<sup>st</sup> day was emotional and it brought back all the feelings I once felt – I conceal all of these on a normal everyday basis. The 2<sup>nd</sup> on the other hand, showed me the ways that it has molded me into the person I am now. They were both important steps.”

Broader exposure (experiencing a wider range of cognitions and emotions during the RT writing) and new perspective: “I like how [the RT writing] made me think about certain things such as the anger that I hadn’t acknowledged before.” “The structured writing...made me realize some feelings that I have never admitted to myself before.” “I was able to look at the bright side which I’ve never done before.”

Cognitive change – increased structure for understanding the traumatic event: “The expressive writing didn’t give me any clarity like the structured did.” “Because I was in each state of mind I was able to see this experience as a whole instead of just messed up pieces.” “The second [RT] writing made me take a broader, and unbiased look at the experience.” “It helped me to clear up my thoughts and lay them out in a more organized manor (sic).”

Cognitive change - increased insight: “The RT theory did [give me new understanding], definitely a different perspective when it came to self sympathy and sympathy for others.” “The RT experiment helped me remember what I need to do and how to handle it.” “In the RT writing I got a new understanding and I now know why I do certain things and why I am the way that I am.”

### Hypotheses

Based on these theoretical and empirical foundations, combined with the qualitative data from the pilot study, the hypothesis for the present study can be summarized by saying that participants in the experimental groups, and the RT group in particular, are expected to show more psychological benefits from participation than the control group. Specifically:

H1: The RT group will have significantly lower scores than the EW group on the Impact of Event Scale and the three subscales of the DASS (Depression, Anxiety, and Stress) upon completion of the study.

H2: The EW group will have significantly lower scores than the control group on the Impact of Event Scale and the three subscales of the DASS (Depression, Anxiety, and Stress) upon completion of the study.

## CHAPTER THREE

### METHOD

#### Participants

Ninety-seven students from a midsize Southern University completed the study; participants were recruited primarily from undergraduate psychology courses. The study sample was 36.7% male and the mean age was 21.60 (range 18 to 45). Seventy-eight percent of the participants identified as Caucasian, 14% identified as African American, 2% identified as Hispanic/Latino(a), 2% as South Asian/East Indian, 1% as Asian American, 1% as Bi/multiracial, and 1% as other.

#### Instruments

##### *Demographic Form*

A researcher-designed demographic form (Appendix C) was used to collect demographic data from all participants at the start of the study. The following information was included on the demographic form: age, gender, ethnicity, relationship status, size of household, college classification, current and past grade point average, and chosen major and college (e.g., Liberal Arts, Engineering).

##### *Apter Motivational Style Profile*

The 40-item, self report version of the Apter Motivational Style Profile (AMSP; Apter International, 1999; Appendix D) was administered to all participants at the beginning of the study. The AMSP measures state dominance for the four RT state pairs,

using eight independent subscale scores (one for each state). Items are scored on a 6-point Likert-style scale ranging from “never” to “always.” Example items are “I help other to succeed” and “I try to act assertively.”

Average internal consistency based on several international samples between 1996 and 2004 (total  $n = 4356$ ) for the subscales are as follows: Telic (.75), Paratelic (.70), Conformist (.58), Negativistic (.79), Autic Mastery (.64), Autic Sympathy (.77), Alloic Mastery (.87), and Alloic Sympathy (.75) (Cronbachs' alpha). Twelve-week test-retest reliability for the subscales ranges from .71 (Conformist) to .92 (Alloic Sympathy); test-retest reliability for the dominance scores ranges from .61 (Autic/Alloic) to .86 (Mastery/Sympathy).

The AMSP has good convergent and divergent validity with a number of other instruments. The telic/paratelic dominance score from the AMSP correlate with the telic and paratelic scales from the Paratelic Dominance Scale (PDS; Cook & Gerkovich, 1993) in the expected directions with satisfactory strength. In particular, the overall paratelic dominance scale (PDS) correlates with the AMSP's telic dominance scale at  $-.70$  (significant at  $p < .001$ ). Also, there is a negative correlation ( $-.55$ ) between telic dominance and extraversion as measured by Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975), significant at  $p < .05$ , as expected (Apter, Mallows, & Williams, 1998). The AMSP also correlates with several scales from the Myers-Briggs Type Indicator (MBTI; Myers, 1962). Specifically, there are correlations between Telic dominance and Judging dominance (MBTI), Paratelic dominance and Perceiving dominance, Conforming and Sympathy dominance with Feeling dominance (MBTI), and Negativistic dominance with Intuition and Perceiving dominance (MBTI) (Tucker &



Routledge, 2003). Significant correlations were also found between AMSP dominances and NEO-FFI's Big Five traits (Costa & McCrae, 1992). Specifically, significant correlations were found between Telic dominance and Conscientiousness (.52), Negativistic dominance and conscientiousness (-.26), and Telic dominance and Extraversion (-.27), among others, all in the directions that were expected (Lafreniere & Cramer, 2006). Discriminant validity is demonstrated with the Beck Depression Inventory, the Booklet Category Test, the Embedded Figures Test, and the Eysenck Personality Questionnaire Neuroticism and Psychoticism subscales (Apter International, 1999). Construct validity exists linking AMSP subscales, as expected, to risky sexual behavior, substance abuse, aggression, anorexia, and job burnout (Apter International). The AMSP is the standard instrument in the Reversal Theory literature for measuring state dominance, and thus was included for use in this study.

#### *Impact of Event Scale*

The Impact of Event Scale (IES; Horowitz, Wilner, & Alvarez, 1979; Appendix E) is a 15-item, self-report scale that measures the subjective experience of post-traumatic stress for the event chosen by the participant. It has two subscales: avoidance (of thoughts, feelings, situations that remind the participant of the event) and intrusive experience (feelings, thoughts, dreams related to the event). Each item is scored as a zero (not at all), one (rarely), three (sometimes), or five (often). Example items are "I thought about it when I didn't mean to" and "I stayed away from reminders of it."

The average internal consistency coefficients are .86 (total) (Horowitz, Wilner, & Alvarez, 1979) and the two subscales coefficients are .88 (avoidance) and .86 (intrusion) (Zilberg, Weiss, & Horowitz, 1982). Test-retest reliability data indicates that the IES has

satisfactory reliability over time, with coefficients for the total at .87, for the intrusion subscale at .89, and for the avoidance subscale at .86 (Zakowski, et al., 1997). Convergent validity is demonstrated between the IES and the Brief Symptom Inventory (BSI; Chen, Yang, Yen, & Wu, 2005), as well as the Self-rated Inventory for Post Traumatic Stress Disorder and the Clinician administered PTSD Scale (Witteveen, Bramsen, & Hovens, 2005). Sloan, Arsenault, and Hilsenroth (2005) demonstrated that the IES has criterion validity in predicting differences between U.S. soldiers who met no criteria, partial criteria, and full criteria for PTSD. Further, research suggests that the IES subscales are sensitive to change over the course of treatment (Zilberg, Weiss, & Horowitz). The IES was selected for use in this study in order to have a reliable measure with a good psychometric history that would address PTSD symptoms specifically in a subclinical population.

#### *Depression, Anxiety, and Stress Scale*

The Depression, Anxiety, and Stress Scale (DASS; Lovibond & Lovibond, 1995; Appendix F) is a 42-item, self report measure of depression, anxiety, and stress (representing the three subscales) for the past week. Items are scored “Did not apply to me at all” (0), “Applied to me to some degree, or some of the time” (1), “Applied to me to a considerable degree, or a good part of the time” (2), or “Applied to me very much, or most of the time” (3). Example items include: “I couldn’t seem to experience any positive experience at all” (depression), “I perspired noticeably in the absence of high temperatures or physical exertion” (anxiety), and “I tended to overreact to situations” (stress).

Internal consistency coefficients for the subscales are .91, .84, and .90 for depression, anxiety, and stress scales respectively (Lovibond & Lovibond, 1995). Test-retest reliability coefficients are .71 (depression), .79 (anxiety), and .81 (stress) (Lovibond & Lovibond). The factor structure of the DASS has been confirmed by exploratory and confirmatory factor analysis in clinical and nonclinical samples (Brown, Chorpita, & Korotitsch, 1997; Crawford & Henry, 2003; Lovibond & Lovibond, 1995). Convergent validity has been demonstrated with the Beck Depression Inventory (.74) and the Beck Anxiety Inventory (.81) (Lovibond & Lovibond). Convergent validity also exists with the Personal Disturbance Scale (sAD) depression scale (.78) and anxiety scale (.72) and the Hospital Anxiety and Depression Scales (HADS; depression (.66) and anxiety (.62); Crawford & Henry). This instrument was selected because it is a relatively short measure combining three constructs of interests that has robust reliability and validity, and is approved for use with nonclinical samples.

#### *Last Day of Writing Questionnaire*

This is a 17-item self report measure introduced into the expressive writing paradigm by Pennebaker, Colder, and Sharp (1990) (Appendix G). The first 15-items are scored on a Likert-style scale without numbers, and ask participants about aspects of the writing experience. For example, “Overall, how personal were the essays that you wrote?” followed by an answer space that looks like this:

\_\_\_\_\_

not personal    very personal

The final two questions are free-response questions regarding the participants' ideas about the purpose of the study and any comments they would like to add. The purpose of the scale is to gather information related to theoretical constructs important to the success of the expressive writing (e.g., degree of inhibition, perceived anonymity). This instrument is included in order to give a richer picture of the factors underlying the clinical benefit of expressive writing and to potentially compare these factors across groups.

## Procedure

### *Basic Procedure*

This study was conducted between March 2008 and August 2008. Each administration ran for five consecutive days, Monday through Friday, for all groups. The study consisted of three groups, of 31 to 33 participants each: a reversal theory writing group, an expressive writing group, and a control group. Each group participated in a variation of Pennebaker's expressive writing task (Pennebaker, 1994). Participants were allowed to elect which time they preferred to participate (morning, afternoon, and evenings session were offered), and then the type of group (control, expressive writing, reversal theory) was randomly assigned. A one-way MANOVA revealed that there were no significant differences in mean scores on any of the variables among the groups, (Wilks' Lambda = .914,  $F(2, 94) = .831, p = .599$ ), indicating that the groups were essentially equivalent on these variables (see Tables 1 and 2).

Table 1

Means and Standard Deviations of Pre-test scores for the Experimental and Control Groups on the Impact of Events Scale

Group	IES		IES		IES	
	(Total)		(Avoidance)		(Intrusive thoughts)	
	M	SD	M	SD	M	SD
Reversal						
Theory (n =33)	38.18	16.20	19.45	10.17	18.73	10.26
Expressive						
Writing (n = 33)	38.27	14.22	19.55	7.56	18.73	9.41
Control						
(n =31)	38.13	16.65	20.94	9.39	17.19	10.50

Table 2

Means and Standard Deviations of Pre-test scores for the Experimental and Control Groups on the Depression, Anxiety, and Stress Scale

Group	DASS		DASS		DASS		DASS	
	(Total)		(Depression)		(Anxiety)		(Stress)	
	M	SD	M	SD	M	SD	M	SD
Reversal								
Theory (n =33)	37.06	27.00	11.88	9.63	8.45	9.00	16.73	11.35
Expressive								
Writing (n = 33)	33.76	27.47	10.82	9.04	9.21	10.51	13.73	10.53
Control								
(n =31)	31.81	23.31	10.87	10.54	7.39	6.67	13.55	8.77

Likewise, a one-way MANOVA revealed that there were no significant differences in mean scores on any of the variables among the groups, (Wilks' Lambda = .836,  $F(2, 94) = 1.021, p=.438$ ), indicating that the groups were essentially equivalent on these variables, as well (see Table 3).

Table 3

Mean Scores for State Dominances on the Apter Motivational Styles Profile

	Reversal Theory		Expressive Writing		Control Group	
	(n = 33)		(n = 33)		(n = 31)	
	M	SD	M	SD	M	SD
Telic	23.88	.59	23.39	.85	23.65	4.26
Paratelic	19.85	4.22	20.79	3.98	20.81	3.11
Conforming	19.85	4.09	21.91	3.31	20.73	4.60
Rebellious	13.27	4.63	12.33	4.20	12.26	4.20
Autic Mastery	20.9	13.08	20.18	3.32	19.94	4.22
Autic Sympathy	20.55	4.58	21.21	4.48	21.39	4.83
Alloic Mastery	22.06	.28	23.55	3.21	22.97	3.65
Alloic Sympathy	24.52	3.17	25.48	3.40	24.48	3.42

All groups met at the same time each day, Monday through Friday. On Day 1 (Monday), all groups completed the first round of instruments. On Days 2-4 (Tuesday through Thursday), they engaged in the writing tasks appropriate to their group. On Day 5 (Friday), they filled out the post-test instruments. Instructions to the participants include an emphasis on the confidentiality of the writing and on writing for the full 20 minutes (see Appendix H for a copy of the basic instructions).

#### *Compensation*

Extra credit was offered for participation at the discretion of each instructor, and an alternate extra credit assignment was made available to those who did not wish to

participate. As an additional incentive, eight \$25.00 gift cards to a local retailer (Walmart) were also available to those who participated, chosen by a random drawing. In addition, research indicates that writing about upsetting experiences facilitates both physical and emotional health in the future, at least up to 6 months.

#### *Preserving Confidentiality*

The writing took place in a group format, with participants situated in desks arranged near the walls of the room, facing the walls. The pilot study data indicated that this allows for the perception of privacy and the convenience of group administration. All data, including the essays, are marked with the participant number, rather than any identifying information. The participant numbers and names were located together only on one master list; this list facilitated the awarding of extra credit.

#### *Safeguards of Physical and Emotional Wellbeing*

Participants were allowed to cease participation at any time without penalty. Participants were made aware at the beginning of the study that increased negative emotional experiencing is often temporarily increased after writing, but that these feelings should subside after about an hour. A licensed psychologist was on call in the event that anyone had an emotional response that they would like to process. Referrals to University Counseling Services (UCS) were made available to those who desired such services. Contact information for UCS was given to all of those who participated.

#### *Control Group Procedure*

The control group met on Day 1 to fill out the first round of instruments including informed consent (see Appendix B for a copy of the informed consent), the demographic form, the AMSP, the IES, and the DASS. The participants chose a traumatic event to



utilize in filling out the measures. On Day 2, the participants engaged in the first of three writing periods. The control group participants were instructed to write continuously for 20 minutes about what they did the day before in great detail. On Day 3, the participants met to write about the events of their day thus far in great detail. On Day 4, the participants met to write about their planned activities for the rest of the day in great detail. The instructions for the control writing group emphasize writing continuously for the full 20 minutes, in as much detail as possible, repeating information if needed (see Appendix I for a copy of the control group instructions). On Day 5, the participants met for a final time, to fill out the second round of instruments including the IES, the DASS, and the Last Day of Writing questionnaire.

#### *Expressive Writing Group Procedure*

The expressive writing group met on Day 1 to fill out the first round of instruments including informed consent (see Appendix B for a copy of the informed consent), the demographic form, the AMSP, the IES, and the DASS. The participants chose a traumatic event to utilize for all days of the study. On Day 2, the participants engaged in the first of three writing periods. The expressive writing group participants was instructed to write continuously for 20 minutes about their deepest thoughts and feelings related to the selected traumatic event (see Appendix J for a copy of the expressive writing group instructions). On Days 3 and 4, the participants repeated the procedure from Day 2. On Day 5, the participants met for a final time, to fill out the second round of instruments including the IES, the DASS, and the Last Day of Writing questionnaire.

*Reversal Theory Writing Group Procedure*

The RT writing group met on Day 1 to fill out the first round of instruments including informed consent (see Appendix B for a copy of the informed consent), the demographic form, the AMSP, the IES, and the DASS. The participants chose a traumatic event to utilize for all days of the study. Also on Day 1, the group also received a short lecture on the eight RT states. On Day 2, the participants engaged in the first of three writing periods, for 20 minutes. This writing period is identical to the Expressive Writing Group's writing period. The instructions for this day emphasize expressing one's deepest thoughts and feelings about the selected traumatic event (see Appendix K for a copy of the reversal theory group instructions). Following this writing, the RT writing group participated in a short guided imagery based on the RT Eight Rooms technique (refer to p. 30). For more information on the Eight Rooms technique, see Appendix L for a copy of the guided imagery script. In addition, the group was instructed to jot down reminders of each state on a note card during the guided imagery to use as a reminder for the following days of writing. The pilot study data indicated that the lecture on the eight states, the guided imagery, and the note cards were all useful in eliciting the states during the latter two writing days. On Day 3, the RT writing group was given sheets of paper with prompts designed to elicit each of the reversal theory states (see Appendix L for a copy of the state prompts). They were instructed to use their note card and the prompt as tools to help them shift into and become aware of the appointed state, and write for about five minutes about the same traumatic event as the previous day from the perspective of that state (see Appendix J for a copy of the RT writing instructions). On Day 3, the participants wrote from four RT states: telic, paratelic, conformist, and negativistic. On

Day 4, the RT writing group repeated the procedure from Day 3, but was prompted to write from the remaining four (combination) states: autic-mastery, autic-sympathy, alloic-mastery, and alloic-sympathy. On Day 5, the participants met for a final time, to fill out the second round of instruments including the IES, the DASS, and the Last Day of Writing questionnaire.

## **CHAPTER FOUR**

### **RESULTS**

A three group, pretest-posttest experimental design evaluated the efficacy of traditional and structured expressive writing tasks in ameliorating symptoms of post traumatic stress, depression, and anxiety in a subclinical group of college students. A MANOVA was used to analyze change scores on the Impact of Events Scale (IES) and the Depression, Anxiety, and Stress Scale (DASS). The means and standard deviations for the group change scores on the IES subscales (avoidance and intrusive thoughts) and the DASS subscales (depression, anxiety, and stress) are presented in Table 4 and Table 5.

Table 4

Means and Standard Deviations of Change in Distress Scores on the Impact of Events Scale for the Experimental and Control Groups

Group	IES		IES		IES	
	(Total)		(Avoidance)		(Intrusive thoughts)	
	M	SD	M	SD	M	SD
Reversal						
Theory (n =33)	8.79	13.65	3.58	8.50	4.88	7.81
Expressive						
Writing (n = 33)	6.12	14.61	2.48	8.40	3.64	8.06
Control Group						
(n =31)	8.06	9.86	3.68	6.48	3.87	5.97

Table 5

Means and Standard Deviations of Change in Distress Scores on the Depression, Anxiety, and Stress Scale for the Experimental and Control Groups

Group	DASS		DASS		DASS		DASS	
	(Total)		(Depression)		(Anxiety)		(Stress)	
	M	SD	M	SD	M	SD	M	SD
Reversal								
Theory (n =33)	8.58	17.06	3.48	7.58	2.30	5.75	2.79	7.33
Expressive								
Writing (n = 33)	4.82	20.09	1.97	8.49	2.33	6.92	0.52	7.25
Control								
(n =31)	2.26	12.51	1.39	5.65	1.03	4.20	-0.16	6.34

Hypothesis one suggested that the Reversal Theory writing group would have significantly lower scores than the Expressive Writing group on the Impact of Event Scale and the three subscales of the DASS (Depression, Anxiety, and Stress) upon completion of the study. Similarly, hypothesis two stated that the Expressive Writing group would have significantly lower scores than the control group on the Impact of Event Scale and the three subscales of the DASS (Depression, Anxiety, and Stress) upon completion of the study. Results of the one-way MANOVA comparing type of writing

exercise on distress scores were nonsignificant (Wilks' Lambda = .94,  $F(10,180) = 0.56$ ,  $p=.845$ ) indicating no significant differences in scores among the groups. Thus, despite nonsignificant trends in the expected directions, neither hypothesis was supported.

The Last-Day-of-Writing Questionnaire was administered to all participants. Based on inhibition theory of emotional disclosure, questions addressing how personal the essays were, how much participants had held back from disclosing before the study, the degree of emotional revelation, and how much they had wanted to talk about the trauma before the study would be expected to correlate with change scores. On the contrary, no significant correlations were found (see Table 6).

Table 6

Means, Standard Deviations, and Correlations Between Items One Through Five on the Last-Day-of-Writing Questionnaire and Change Scores on Measures of Distress

	M	SD	IES (Tot)	IES (Av)	IES (Intr)	DASS (Tot)	DASS (De)	DASS (Anx.)	DASS (Str.)
Item 1	4.20	1.84	-.12	-.10	-.10	.06	.09	.09	-.02
Item 2	2.15	1.88	.14	.20	.04	.18	.09	.17	.19
Item 3	3.51	2.22	-.05	-.01	-.08	.17	.15	.16	.13
Item 4	3.27	2.17	-.13	-.16	-.05	.02	.02	.10	-.05
Item 5	2.29	2.02	-.02	-.02	-.02	.09	.20	.00	.00

*Note.* Item 1 = Overall, how personal were the essays that you wrote?; Item 2 = Prior to the experiment, how much had you told other people about what you wrote?; Item 3 = Overall, how much did you reveal your emotions in what you wrote?; Item 4 = How much have you actively held back from telling others about what you wrote?; Item 5 = Prior to the experiment, how much had you wanted to talk with someone about what you wrote?

Also, item seven (“In general, how sad or depressed have you felt over the last 3 days?”) and Item eight (“In general, how happy have you felt over the last 3 days?”) on the Last-Day-of-Writing Questionnaire would be expected to show differences between groups, but again, this was not the case. ANOVA showed no significant differences among groups on question seven,  $F(2,93) = 1.47$ ,  $MSE = 4.40$ , ns, or question eight,  $F(2,93) = 1.56$ ,  $MSE = 3.31$ , ns.



## CHAPTER FIVE

### DISCUSSION

The focus of the present study was to determine if added clinical benefit could be derived from the expressive writing paradigm by adding structure based on Reversal Theory (RT) concepts. Because the MANOVA indicated no significant group differences, an examination of the study's hypotheses, limitations of the study, and recommendations for future research follow.

#### Hypothesis Testing

##### *Hypothesis One*

The first hypothesis proposed that the RT structured writing group would have lower (i.e., healthier) scores on both instruments (IES and DASS) than the expressive writing group. This expectation arose out of two theories of positive change related to expressive writing, specifically habituation theory and cognitive change theory, discussed further below.

##### *Hypothesis Two*

The second hypothesis proposed that the expressive writing group would have lower (i.e., healthier) scores on both instruments, the Impact of Events Scale (IES) and the Depression, Anxiety, and Stress scale (DASS) than the control group, who wrote about trivial topics. The positive impact of expressive writing on symptoms of trauma, including PTSD symptoms, anxiety, and depression, is a finding that has been replicated

several times (e.g., Campbell, 2003; Koopman et al., 2005; Lepore, 1997; Opre et al., 2005; Russ, 1992). Thus, it was surprising that the expressive writing group did not show significantly lower scores on either measure. This leads the author to believe that changes in the standard methodology, although supported qualitatively by the pilot study, may have contributed to the efficacy of the expressive writing treatment. These issues will be considered further in the Limitations section.

### *Findings and Implications*

Habituation theory suggests that repeated exposure to a traumatic memory diminishes the negative psychological effects of that trauma (Lepore et al., 2002). The anticipation was that gaining exposure to the traumatic event from each of the eight RT states would be even more useful. However, these nonsignificant findings suggest two other possibilities. First, perhaps the states that are most salient by the traumatic event at its occurrence or the states that are primarily elicited by recollection of the trauma are the only states from which exposure is helpful. For example, if the most salient states during a traumatic event are the Telic and Self Mastery states, perhaps exposure to the traumatic event from the perspective of those states is most useful, while exposure from the paratelic and sympathy states is not. Second, because the exposure was divided across states, perhaps there was not enough exposure to gain positive change in symptoms.

Cognitive change theory is based on the data that, over the course of expressive writing, individuals' writing becomes more structured with evidence of higher level thinking, especially the writing of those who make the greatest positive changes (Pennebaker, 1997a; Pennebaker & Francis, 1996). It was considered that the application of structure to the writing might facilitate this process. Though the pilot participants

indicated positive changes in cognitive structure regarding their traumatic event, this did not translate to positive gains in post traumatic stress, depressive, or anxious symptoms in the current sample. The nonsignificant results suggest that perhaps the imposition of structure is not helpful to the writing process, or that the unassisted process of movement to higher levels of thinking is more important to symptom reduction than the structure itself. Another possibility is that the narrative quality of the writing is diminished by the imposed structure. Because the narrative of the traumatic event becomes more sequential and contained in writings that seem to produce the most positive change (Foa et al, 1995; Pennebaker, 1997a), the possible reduction of the narrative quality, or even the reduction of time to compose a narrative in each state, may have influenced the outcome.

The lack of significant results on the Last-Day-of-Writing Questionnaire demonstrates that the groups did not experience significant differences in emotional valence during the study (i.e., happiness or sadness) or in reduction of inhibition. This further confirms that the positive clinical gains expected from inhibition theory were not experienced. Again, the most likely reason for these nonsignificant results is changes in the standard methodology.

#### *Limitations of Study*

Several limitations in the study's design and execution may have affected the results. The first limitation may relate to the population used. Because this study was the first exploration into the application of Reversal Theory to the expressive writing paradigm, a convenience sample of college students was utilized. It was assumed that this population would represent a subclinical sample. However, the sample may have had so much breadth in symptomology and change that the results were affected. The range of

scores was extreme, from no symptoms at all to significant pathology. Further, responses to the treatments were varied, with significant positive and negative change being noted in all three groups. The range of pretest, posttest, and change scores can be seen in Table 7. A more carefully chosen group of participants with a more condensed range of symptoms may demonstrate more interpretable results.

Table 7

Ranges of Distress Scores Across All Groups

	Lowest Score	Highest Score
Impact of Event Scale – Pretest	1	69
Depression, Anxiety, and Stress Scale – Pretest	0	99
Impact of Event Scale – Posttest	2	67
Depression, Anxiety, and Stress Scale – Posttest	0	109
Impact of Event Scale – Change Score*	-26	42
Depression, Anxiety, and Stress Scale – Change Scores*	-34	52

*Note.* Positive scores indicate decreases in scores (movement towards psychological health).

A second consideration is the basic methodology. The expressive writing paradigm was followed very closely for some parts of the study, such as the instructions given to the participants regarding their writing samples. However, some portions of the methodology were new or changed, and tested during the pilot study. Specifically, all of the methods related to Reversal Theory were new additions to the traditional paradigm. In

particular, the Eight Rooms technique, while popular in some contexts, has not yet been standardized for use in clinical research.

Another important factor may have been the small group administration. This is in contrast to the individual administration that is commonly used in the traditional expressive writing paradigm. Participants in the pilot confirmed that the small group administration offered the perception of privacy and that they were able to write about their deepest thoughts and feelings regardless of not being alone. Also, Pennebaker (1997a) suggests that a unique, uninterrupted setting works best, and the setting for this study was a common university building. Since this is the most significant methodological difference, the lack of replication of the typical expressive writing effect suggests that this administration style may not be appropriate.

#### *Directions of Future Research*

Based on the limitations considered, a revised replication of this study is warranted. However, the nonsignificant results suggest several other interesting research questions surrounding the issues of personality state and the effectiveness of disclosure studies. For example, are traumas often experienced or re-experienced in certain states? Which states are the most helpful in which to process trauma – the same states in which the trauma was experienced, the other states? Do the issues of dominance and/or salience of states affect how useful the state-based structured writing is? These questions may explain the mixed efficacy of the present study, and are also prompted by data gathered from the RT writing group answering subjectively which states were most and least helpful for them. This data is summarized in Table 8.

Table 8

## Responses Indicating Most Helpful and Least Helpful State-Writings

Responses (n=33)	Most Helpful	Least Helpful
Telic	9	1
Paratelic	1	10
Conforming	2	6
Rebellious	3	12
Self Mastery	6	0
Other Mastery	1	2
Self Sympathy	6	1
Other Sympathy	5	1

Interestingly, every state was described as most helpful by at least one of the thirty-three participants, though the telic, self-mastery, self-sympathy, and other sympathy were rated most often. All but one of the states (self-mastery) was rated as least helpful; the paratelic, conforming, and rebellious states were rated most often as the least helpful states, with the rebellious state being noted most often. This is especially surprising, because the instructions for the rebellious state writing sample are most like those for the expressive writing- to explore one's own thoughts and feelings without regard to how others may perceive them. This is consistent with what Pennebaker (1997a) describes as "making yourself the audience, [so that] you don't have to rationalize or justify yourself to suit the perspective of another person" (p. 41). If these

prompts do elicit similar writing processes, then research into the difference between perceived effectiveness and actual effectiveness may be warranted, or there may be even more possible benefit to be gained from the other writing states than was elucidated in the present study.

Other possible areas for future research in this area include addressing issues such as psychodiversity (the extent to which one is able to operate out of all eight states) as an indicator of mental health and the ability of individuals to effectively switch states. The addition of linguistic analysis may offer further insight into the differences and possible benefits of state-based writing. The unexpected findings of this study open many more avenues for research in the possibility to utilize personality concepts in drawing out the most clinical benefit from therapeutic disclosure techniques.

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**APPENDIX A**

**HUMAN USE COMMITTEE APPROVAL FORM**

## MEMORANDUM

TO: Ms. Stephanie Ellis

FROM: Barbara Talbot, University Research

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: April 3, 2008

In order to facilitate your project, an EXPEDITED REVIEW has been done for your proposed study entitled: "Examination of the Clinical Benefit of Applying Reversal Theory Concepts to the Expressive Writing Paradigm: Effects on Depressive, Anxious, and Post-Traumatic Symptoms" # HUC-562

The proposed study's revised procedures were found to provide reasonable and adequate safeguards against possible risks involving human subjects. The information to be collected may be personal in nature or implication. Therefore, diligent care needs to be taken to protect the privacy of the participants and to assure that the data are kept confidential. Informed consent is a critical part of the research process. The subjects must be informed that their participation is voluntary. It is important that consent materials be presented in a language understandable to every participant. If you have participants in your study whose first language is not English, be sure that informed consent materials are adequately explained or translated. Since your reviewed project appears to do no damage to the participants, the Human Use Committee grants approval of the involvement of human subjects as outlined.

Projects should be renewed annually. This approval was finalized on March 27, 2008 and this project will need to receive a continuation review by the IRB if the project, including data analysis, continues beyond March 27, 2009. Any discrepancies in procedure or changes that have been made including approved changes should be noted

in the review application. Projects involving NIH funds require annual education training to be documented. For more information regarding this, contact the Office of University Research.

You are requested to maintain written records of your procedures, data collected, and subjects involved. These records will need to be available upon request during the conduct of the study and retained by the university for three years after the conclusion of the study. If changes occur in recruiting of subjects, informed consent process or in your research protocol, or if unanticipated problems should arise it is the Researchers responsibility to notify the Office of Research or IRB in writing. The project should be discontinued until modifications can be reviewed and approved.

If you have any questions, please contact Dr. Mary Livingston at 257-4315.

**APPENDIX B**

**HUMAN SUBJECTS CONSENT FORM**

## HUMAN SUBJECTS CONSENT FORM

The following is a brief summary of the project in which you are asked to participate. Please read this information before signing the statement below.

TITLE OF PROJECT: Reversal Theory Writing (An Examination of the Clinical Benefit of Applying Reversal Theory Concepts to the Expressive Writing Paradigm)

PURPOSE OF STUDY/PROJECT: This study is intended to examine the effects of different types of writing on certain psychological variables.

PROCEDURE: The first and last days of the project will be questionnaire sessions. The three other days will be sessions in which the participants complete a writing sample.

INSTRUMENTS: The instruments used in this project include a demographic form, the Apter Motivational Styles Profile (AMSP), the Depression, Anxiety, and Stress Scale (DASS), the Impact of Events Scale (IES), and a writing feedback form.

RISKS/ALTERNATIVE TREATMENTS: Risks include increased negative emotions in response to writing about an upsetting experience. However, research indicates that these heightened feelings are temporary (lasting about an hour) and that the writing process facilitates decreased negative emotion in the future. The participant understands that Louisiana Tech is not able to offer financial compensation nor to absorb the costs of medical treatment should you be injured as a result of participating in this research.

BENEFITS/COMPENSATION: Extra credit will be offered for participation, and an alternate extra credit assignment will be made available to those who do not wish to participate. Gift cards (\$25) will be given out using a random drawing to some of those who participate. Research also indicates that writing about upsetting experiences facilitates physical and emotional health in the future.

I, \_\_\_\_\_, attest with my signature that I have read and understood the description of the study, "Reversal Theory Writing", and its purposes and methods. I understand that my participation in this research is strictly voluntary and my participation or refusal to participate in this study will not affect my relationship with Louisiana Tech University in any way. Further, I understand that I may withdraw at any time or refuse to answer any questions without penalty. Upon completion of the study, I understand that the aggregate results will be freely available to me upon request. I understand that the results of my survey will be confidential, accessible only to the principal investigators,



myself, or a legally appointed representative. I have not been requested to waive nor do I waive any of my rights related to participating in this study.

---

Signature of Participant or Guardian

---

Date

CONTACT INFORMATION: The principal experimenters listed below may be reached to answer questions about the research, subjects' rights, or related matters.

Stephanie Ellis

318-257-3413 or ske006@latech.edu

Dr. Tony Young

318-257-3229 or tyoung@latech.edu

Members of the Human Use Committee of Louisiana Tech University may also be contacted if a problem cannot be discussed with the experimenters:

Dr. Les Guice (257-3056)

Dr. Mary M. Livingston (257-2292 or 257-4315)

**APPENDIX C**

**DEMOGRAPHIC FORM**

## Demographic Form

I would like to ask for some background information about you, for statistical purposes.

1. Age: \_\_\_\_\_

2. Gender: \_\_\_\_\_ Female \_\_\_\_\_ Male

3. Relationship status (please circle):

\_\_\_\_\_ Single (never married) \_\_\_\_\_ Married/Partnered \_\_\_\_\_ Separated/Divorced  
 \_\_\_\_\_ Widowed

4a. Including yourself, how many people live in your household? \_\_\_\_\_

4b. How many children do you have? \_\_\_\_\_

4c. How many of them are still living with you? \_\_\_\_\_

5. Choose the racial/ethnic category with which you most identify:

\_\_\_\_\_ African American \_\_\_\_\_ Asian American \_\_\_\_\_ Caucasian

\_\_\_\_\_ Hispanic/Latino/a \_\_\_\_\_ Native American

\_\_\_\_\_ South Asian/Indian Subcontinent \_\_\_\_\_ Bi/multiracial

\_\_\_\_\_ Other, please specify \_\_\_\_\_

6. What is your classification (please circle):

\_\_\_\_\_ Freshman \_\_\_\_\_ Sophomore \_\_\_\_\_ Junior \_\_\_\_\_ Senior \_\_\_\_\_ Grad Student

7a. What is your current (college) gpa? \_\_\_\_\_ 7b. high school gpa? \_\_\_\_\_

8a. What is your major? \_\_\_\_\_

8b. College of: \_\_\_\_\_ Administration & Business \_\_\_\_\_ Applied & Natural Sciences

\_\_\_\_\_ Education \_\_\_\_\_ Engineering & Sciences \_\_\_\_\_ Liberal Arts

## **APPENDIX D**

### **APTER MOTIVATIONAL STYLES PROFILE**

## AMSP

Please decide for each of the descriptive phrases on this page how often it applies to you. Respond by indicating one choice for each phrase. Do this for the whole list, making sure that you have responded to each one with a single choice. Note that you are asked to make a judgment about *how often* you experience something.

Here are a few guidelines to keep in mind as you complete the survey:

Try not to allow your feelings at this moment to sway your judgment, but make an estimate based on how you experience things in general

Please be careful and accurate, but do not agonize over your responses. Very often your first feeling is the most accurate one.

Your responses will remain confidential

There are no right or wrong answers.

N	SE	SO	O	VO	A	Key: Never (N), Seldom (SE), Sometimes (SO), Often (O), Very Often (VO) or Always (A)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I like to break rules.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I like to feel powerful.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I help others to succeed.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I have fun.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I care what happens to others.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I do things that I consider important.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I show belief in someone else's abilities.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I like to be attractive to others.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I attempt to fit in with others.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I act in a contrary fashion.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I relish competing with others.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I like to play by the rules.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I like to be liked.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I am a good friend.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I take a long-term perspective.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I help others to achieve things.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I enjoy myself.
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I give to those in need.

<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I work for long-term goals.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I enjoy defying authority.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I look for responsibility.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I help others believe in themselves.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I avoid annoying others.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I aim to be kind to others.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I act spontaneously.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I worry about whether others like me.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I plan ahead.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I like to be in control of things.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I want to do things that are prohibited.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I encourage someone else to do better.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I behave impulsively.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I hate to feel unpopular.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I try to avoid "making waves."
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I ask myself whether I am making progress.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I try to act assertively.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I do what I want to do at the moment.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I aim to be considerate of others.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I enjoy giving presents.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I feel rebellious.
<input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/> <input type="radio"/>	I welcome attention from others.

## **APPENDIX E**

### **IMPACT OF EVENTS SCALE**

IES

*Instructions:* The following is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you *in the past few days* with respect to the stressful event. How much were you distressed or bothered by these difficulties?

		Not at all	Rarely	Some- times	Often
1	I thought about it when I didn't mean to.	0	1	3	5
2	I avoided letting myself get upset when I thought about it or was reminded of it.	0	1	3	5
3	I tried to remove it from memory.	0	1	3	5
4	I had trouble falling asleep or staying asleep, because of pictures or thoughts that came into my mind.	0	1	3	5
5	I had waves of strong feelings about it.	0	1	3	5
6	I had dreams about it.	0	1	3	5
7	I stayed away from reminders about it.	0	1	3	5
8	I felt as if it hadn't happened or wasn't real.	0	1	3	5
9	I tried not to talk about it.	0	1	3	5
10	Pictures about it popped into my mind.	0	1	3	5
11	Other things kept making me think of it.	0	1	3	5
12	I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	3	5
13	I tried not to think about it.	0	1	3	5
14	Any reminder brought back feelings about it.	0	1	3	5
15	My feelings were kind of numb.	0	1	3	5



## **APPENDIX F**

### **DEPRESSION, ANXIETY, AND STRESS SCALE**

## DASS

Please read each statement and circle a number 0, 1, 2, or 3 which indicates how much the statement applied to you over the past week. There are no right or wrong answers. Do not spend too much time on any statement.

0 – does not apply to me at all

1 – applies to me to some degree, or some of the time

2 – applies to me to a considerable degree, or a good part of the time

3 – applies to me very much, or most of the time

1. I found myself getting upset by quite trivial things.	0	1	2	3
2. I was aware of dryness in my mouth.	0	1	2	3
3. I couldn't seem to experience any positive feeling at all.	0	1	2	3
4. I experienced breathing difficulty (e.g., excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5. I just couldn't seem to get going.	0	1	2	3
6. I tended to overreact to situations.	0	1	2	3
7. I had a feeling of shakiness (e.g., legs going to give way).	0	1	2	3
8. I found it difficult to relax.	0	1	2	3
9. I found myself in situations that made me so anxious I was most relieved when they ended.	0	1	2	3
10. I felt that I had nothing to look forward to.	0	1	2	3
11. I found myself getting upset rather easily.	0	1	2	3
12. I felt that I was using a lot of nervous energy.	0	1	2	3
13. I felt sad and depressed.	0	1	2	3
14. I found myself getting impatient when I was delayed in any way.	0	1	2	3
15. I had a feeling of faintness.	0	1	2	3
16. I felt that I had lost interest in just about everything.	0	1	2	3
17. I felt I wasn't worth much as a person.	0	1	2	3
18. I felt that I was rather touchy.	0	1	2	3
19. I perspired noticeably (e.g., hands sweaty) in the absence of high temperatures of physical exertion.	0	1	2	3
20. I felt scared without any good reason.	0	1	2	3
21. I felt that life wasn't worthwhile.	0	1	2	3
22. I found it hard to wind down.	0	1	2	3
23. I had difficulty in swallowing.	0	1	2	3
24. I couldn't seem to get any enjoyment out of the things I did.	0	1	2	3
25. I was aware of the action of my heart in the absence of physical exertion (e.g., sense of heart rate increase, heart missing a beat).	0	1	2	3
26. I felt downhearted and blue.	0	1	2	3
27. I found that I was very irritable.	0	1	2	3
28. I felt that I was close to panic.	0	1	2	3

29. I found it hard to calm down after something upset me.	0	1	2	3
30. I feared that I would be "thrown" by some trivial by unfamiliar task.	0	1	2	3
31. I was unable to become enthusiastic about anything.	0	1	2	3
32. I found it difficult to tolerate interruptions to what I was doing.	0	1	2	3
33. I was in a state of nervous tension.	0	1	2	3
34. I felt I was pretty worthless.	0	1	2	3
35. I was intolerant of anything that kept me from getting on with what I was doing.	0	1	2	3
36. I felt terrified.	0	1	2	3
37. I could see nothing in the future to be hopeful about.	0	1	2	3
38. I felt that life was meaningless.	0	1	2	3
39. I found myself getting agitated.	0	1	2	3
40. I was worried about situations in which I might panic and make a fool of myself.	0	1	2	3
41. I experienced trembling (e.g., in the hands).	0	1	2	3
42. I found it difficult to work up the initiative to do things.	0	1	2	3

**APPENDIX G**

**LAST DAY OF WRITING QUESTIONNAIRE**

## Last Day of Writing Questionnaire

ID # \_\_\_\_\_ Date \_\_\_\_\_

In answering the following questions, consider all three days of your writing. Place a check along the line according to how you feel.

1. Overall, how personal were the essays that you wrote:

\_\_\_\_\_ not personal \_\_\_\_\_ very personal

2. Prior to the experiment, how much had you told other people about what you wrote:

\_\_\_\_\_ not at all \_\_\_\_\_ a great deal

3. Overall, how much did you reveal your emotions in what you wrote:

\_\_\_\_\_ not at all \_\_\_\_\_ a great deal

4. How much have you actively held back from telling others about what you wrote:

\_\_\_\_\_ not at all \_\_\_\_\_ a great deal

5. Prior to the experiment, how much had you wanted to talk with someone about what you wrote:

\_\_\_\_\_ not at all \_\_\_\_\_ a great deal

6. Over the last 3 days, how difficult has it been for you to write during the experiment:

\_\_\_\_\_ not at all \_\_\_\_\_ extremely

7. In general, how sad or depressed have you felt over the last 3 days:

\_\_\_\_\_ not at all \_\_\_\_\_ extremely

8. In general, how happy have you felt over the last 3 days:

\_\_\_\_\_ not at all \_\_\_\_\_ extremely

9. During your normal day, to what degree have you thought about this experiment since it began:

\_\_\_\_\_ not at all \_\_\_\_\_ a great deal

10. Since the beginning of the study, during the hours that you were not involved in the experiment, to what degree have you thought about the topics that you wrote about:

\_\_\_\_\_ not at all \_\_\_\_\_ a great deal

11. Before the experiment ever began, to what degree did you think about the topics you wrote about:

\_\_\_\_\_

not at all a great deal

12. How important has it been to you that your essays were anonymous:

\_\_\_\_\_

not at all extremely

13. To what degree would you like other people (who you don't know) to read your anonymous essays:

\_\_\_\_\_

would not like would like it  
it at all a great deal

14. To what degree would you like to have your essays thrown away without anyone ever reading them:

\_\_\_\_\_

would not like would like it  
it at all a great deal

15. Other than receiving extra credit, to what degree has this experiment been valuable or meaningful for you:

\_\_\_\_\_

not at all extremely  
valuable/meaningful valuable/meaningful

16. In your own words, what do you think this experiment is trying to prove:

17. Any comments that you have about the experiment would be greatly appreciated. (Use back if necessary)

## **APPENDIX H**

### **BASIC INSTRUCTIONS – ALL GROUPS**

### Basic Instructions – All Groups

This study is an extremely important project looking at writing. Over the next three days, you will be asked to write about one of several different topics for 20 minutes each day. You will first come back to this room where you will be given your instructions for the day and do your writing.

The only rule there is about your writing is that you write continuously for the entire time. If you run out of things to say, just repeat what you have already written. In your writing, don't worry about grammar, spelling, or sentence structure. Just write. Different people will be asked to write about different topics. Because of this, I ask that you not talk with anyone about the experiment. I can't tell you what other people are writing about or anything about the nature or predictions of the study. Once the study is complete, however, we will tell you everything. Another thing is that sometimes people feel a little sad or depressed after writing. If that happens, it is completely normal. Most people say that these feelings go away in an hour or so. If at any time over the course of the experiment you feel upset or distressed, please contact me or have your administrator contact me immediately. (Note all participants receive a sheet with phone numbers).

Another thing. Your writing is completely anonymous and confidential. I will ask you to put your subject number on your writing samples when you turn them in. Some people in the past have felt that they didn't want anyone to read them. That's OK, too. If you don't feel comfortable turning in your writing samples, you may keep them. I would prefer if you turned them in, however, because I am interested in what people write. I promise that none of the experimenters, including me, will link your writing to you. The one exception is that if your writing indicates that you intend to harm yourself or others, I



am legally bound to match your ID with your name. Above all, I respect your privacy.

Do you have any questions to this point? Do you still wish to participate?

## **APPENDIX I**

### **CONTROL GROUP WRITING INSTRUCTIONS**

### Control Writing Group Instructions

What I would like you to write about over the next three days is how you use your time. Each day, I will give you different writing assignments on the way you spend your time. In your writing, I want you to be as objective as possible. I am not interested in your emotions or opinions. Rather I want you to try to be completely objective. Feel free to be as detailed as possible. In today's writing, I want you to describe what you did yesterday from the time you got up until the time you went to bed. For example, you might start when your alarm went off and you got out of bed. You could include the things you ate, where you went, which buildings or objects you passed by as you walked from place to place. The most important thing in your writing, however, is for you to describe your days as accurately and as objectively as possible.

(On the second day of writing): Today, I would like you to describe what you have done today since you woke up. Again, I want you to be as objective as possible to describe exactly what you have done up until coming to this experiment...

(On the third day of writing): Today, I want you to describe in detail what you will do as soon as the experiment is over until you go to bed tonight. For example, you might start by noting that you will walk out of the door, go down the steps, walk across the campus, and so forth.

**APPENDIX J**

**EXPRESSIVE WRITING GROUP INSTRUCTIONS**

## Expressive Writing Group Instructions

What I would like to have you write about for the next three days is the most traumatic, upsetting experience of your entire life or a traumatic event that has really been bothering you lately. In your writing, I want you to really let go and explore your very deepest emotions and thoughts. Whatever you choose to write, however, it is critical that you really delve into your deepest emotions and thoughts. Ideally, I would also like you to write about significant experiences or conflicts that you have not discussed in great detail with others. Remember that you have three days to write. You might tie your personal experiences to other parts of your life. How it is related to your childhood, your parents, people you love, who you are, or who you want to be. Again, in your writing, examine your deepest emotions and thoughts.

(On the second day of writing): Today, I want you to continue writing about the most traumatic experience of your life or a traumatic event that has really been bothering you lately, the same event that you wrote about yesterday. But today, I really want you to explore your very deepest emotions and thoughts...

(On the third day of writing): You have written now for two days. You only have today to finish your writing. As with the first two days, I want you to really explore your deepest thoughts and feelings about the most traumatic experience of your life or a traumatic event that has really been bothering you lately, the same event that you wrote about yesterday. Remember that this is the last day and so you might want to wrap everything up. For example, how is this experience related to your current life and your future? But feel free to go in any direction you feel most comfortable with and delve into your deepest emotions and thoughts...

## **APPENDIX K**

### **REVERSAL THEORY GROUP WRITING INSTRUCTIONS**

## Reversal Theory Writing Group Instructions

(Days 3 and 4)

Today, I want you to continue writing about the most upsetting experience of your life, or a traumatic event that has been bothering you – the same event you wrote about yesterday. I really want you to explore your very deepest emotions and thoughts.

Today, you will divide your writing up into four short segments, remembering to write about the same experience each time. Each piece of paper you have for writing on has a different prompt at the top to help you guide your writing. You will write on each paper for about 5 minutes – I will tell you when it is time to move on to the next prompt.

**APPENDIX L**

**EIGHT ROOMS GUIDED IMAGERY SCRIPT**



## Eight Rooms Guided Imagery Script

"Get as comfortable as you can in your chair, with your notecards and a pen only on your desk. Let your eyes focus comfortably on one spot. You can begin to relax, and as you do, you can close your eyes whenever you feel it is the right time. Focus for a moment on your breathing, being very present, and let your breath be very easy. Allow relaxation to come to all of your stiff muscles, beginning at the top of your head, and to your neck and shoulders. Feel the relaxation, maybe it feels warm, or cool, heavy or light. Feel it go down into your chest and back, stomach and hips. Let it flow down your arms into your hands and fingers. Let it flow down into your legs, feet, and toes. When you are relaxed, your imagination is very powerful, and so we'll be using your imagination today, and it will be fun and easy to do. And though this will take several minutes, your imagination and your creativity is so engaging that you'll have no trouble at all paying attention. And whenever you feel your mind drifting, you know you can always bring it comfortably and easily back to the activity. Hold on to that feeling of relaxation, keep focusing on your breathing, deep and easy. Realize that you can open your eyes and still hold on to that relaxation, but that when you close your eyes, it comes back even more. Go ahead and open your eyes, and keep a hold on the feeling of a comfortable, relaxed body and easy open breathing. Then close your eyes again and feel it even more. So when you are relaxed, with your eyes closed, I'd like you to imagine that you are in a corridor, with 4 doors on either side. Each door has a label, and each label is a reversal theory motivational state, e.g. serious, sympathy. The first room on your right is labeled Telic, or maybe it's labeled Serious, and you realize that each room will be associated with one motivational state. You've been in the serious state before, haven't you? There have been

times when you have been goal oriented, thinking about the future, being serious and doing work, haven't there? As you enter the Telic room, in your imagination, furnish it with things that you associate with the telic state. For example, the telic, or serious, or goal oriented room might have a large desk, a project chart on the wall, a book case with reference books, a clock, and so on. You need not be restricted to conventional furniture, but include anything that you associate with the serious state. What color are the walls? What type of flooring is there? Try to think not only of objects, but also of colours, sounds, smells, activities, even people. The aim is that, when you later enter a given room in your imagination, you are so overwhelmed by all the stimuli that you are transported into that state. So be very specific, and don't be afraid to be "over the top." This means that if you want to get into one of the motivational states, you can in your imagination walk up the corridor to the room that represents that state and enter into it. In your telic room, you are surrounded by things that make you think seriously about your goals and about the future. When you feel you have a picture of your own personal telic room, you stay relaxed, and keep that image in your mind, but calmly and slowly open your eyes, just for a moment, and write yourself some descriptors of the Telic room on one of your notecards. When you are finished, you can close your eyes again, and sit for a moment in your telic room, absorbing the feeling of being surrounded by serious things. ... Now, as you remain comfortable, I'd like you to leave your telic room and walk across the corridor into the Paratelic, or playful room. You've had the experience of being playful before, haven't you? There have been times when you've been doing things you love so that you were wrapped up in the experience and forgot about the time, right? There have been times when you have just enjoyed life, and been fully present in the moment,

haven't there? There have even been times when you have enjoyed feelings of sadness, or fear, or anger – such as when watching a movie or reading a great book, haven't there? As you did earlier, furnish this room with all the things you enjoy, anything that to you seems fun and playful, exciting things. The playful room might have a pool table, a bar, a television set, etc. - for example, the playful room might have various kinds of sports equipment lying around or a hammock hanging. All the things in the room, from the colors to the textures to the objects, should pull you towards enjoyment and being in the moment. When you're in this room you feel full of joy and fun, and want to stay in the moment forever. Continue furnishing your room, and when you feel it is complete, you can again open your eyes, while remaining relaxed, and write on another notecard some reminders of what your paratelic room is like. Again, when you're finished, you can just sit for a moment, eyes closed, and be absorbed by the atmosphere of your paratelic room. Now that you have a detailed conceptualization of your telic and paratelic rooms, go ahead and leave those two rooms behind. Out in the hallway, choose the next set of doors, and label one of them your Conforming room. You have had the experience of conforming before, and it sometimes has been good, hasn't it? There are times when using the rules feels right, such as when playing a game or in a particular situation or with particular people, aren't there? Go in and begin to furnish this room in your imagination, remembering that this is a room where it feels good to do what is expected of you, to play by the rules. Some people's conforming room may resemble a church, or a classroom, or a place to play games. What does your conforming room look like? When do you find it pleasant to do what people expect? What is the atmosphere in this room? The feel of it? What specific objects are there? What color is this room? What kind of art could there

be? When you have it firmly in mind, write yourself some notes to remember this room by. Then just sit and allow yourself to steep in those images for a few moments. ... Now, journey across the hall into the Rebellious room. This is the room where you don't want to meet other's expectations. There have been times when you wanted to break the rules, haven't there? You have had the experience of wanting to express yourself or be contrary to the norm, haven't you? Maybe this room is painted wildly, or black. Maybe there is loud music, or scribbling all over the walls. Maybe the smell of alcohol or pot or cigarette smoke lingers. When you really want to break the rules, what do you want to do? Furnish this room in a way that allows you to break the rules all you want. What kinds of furniture or objects would make being rebellious more fun? What would you wear when you are in this room? Something sexy, something wild, nothing at all? Really let yourself get into the feeling of this room, and let your imagination run wild. When you have a crystal clear picture of your own rebellious room, write some notes down so you can remember it exactly as it is, and go back to it whenever you feel the urge. ... Now that you've completed the conforming and rebellious rooms, step back out into your hallway. Look back over your shoulder and you can see your telic and paratelic rooms waiting. Look forward and you can see two more sets of empty rooms. Go to the next empty room, and label it your Self Mastery room. Open the door and begin to decorate this room with all the things that make you feel powerful and in control. There have been times when you have felt powerful, haven't there? You have had the experience of pushing yourself to do more, or to win, haven't you? What are some things that make you feel like you can accomplish anything? Maybe there is sports equipment, or workout machines. Maybe there are trophies or ribbons reminding you of how you have mastered

situations before. What color is your self mastery room? What are some things that make you feel like pushing yourself to the max, like competing with others and winning? How big is this room? What sounds are there? Maybe there's cheering or maybe a voice telling you work harder, push farther. When you're in this room you can feel something rise up inside you, something powerful. When you have a clear picture of your self mastery room, open your eyes and jot down a few notes about what you put in there. Then, just allow yourself to be in that room for awhile, absorbing the feelings. ... Now, walk out into your hallway, across a few steps and switch gears into your Self Sympathy room. As you walk in, you begin to furnish this room with things that make you feel comforted. There have been times when you have felt down, or tired, or scared, right? There have even been times when you have been able to soothe yourself, or calm yourself, or just give yourself some much needed time to care for you, haven't there? What do you like to do when you're cutting yourself a break? Take a bath? Curl up with coffee and a good book? Go swimming? Create an environment in this room where you can rest, where you can soothe yourself if you're feeling tired, or sad, or nervous. Let this room be filled with anything that might indulge you. What is your favorite, calming color? Is that a good color for this room? This room gives you an immense feeling of being cared for, and comforted. When you've created the perfect room for Self sympathy, give yourself a few reminders on a note card, and then slip easily back into that caring, comfortable place. ... Now, remembering that you can come back any time you want, allow yourself to step back out into the hallway. You see two doors remaining. Label one of these doors Mastery for Others, and then step inside. In this room, you can furnish it with anything that makes you feel like cheering someone else on, or pushing them to do better. There

have been people in your life who you have encouraged, haven't there? There have been times when you have wanted others to do well, or to win, or to be the best they could be, right? When you're in this room, you feel like a coach, or a teacher, or a mentor. Maybe there are pictures in this room of people you have taught or coached before. What kinds of things would you use to motivate someone else? Music? Rewards? Fill this room with things that help you to put your focus on someone else, or many other people. Fill it with things that remind you about how much you want success for those special people, and how you could encourage them. This is a room where you could truthfully tell another person "you can be whoever you want to be." When you have filled this room, again just make some notes to help remind you, and then stand in your room for another minute and just observe, noticing if there's anything else you want to add, or if this room brings memories to you. ... And now step back out into the hallway and cross to the final room. In this room, the Sympathy for Others room, you can decorate it as a special place to nurture and care for other people. Maybe people who are close to you, or people in need of care, like children. There have been times when you have wanted to care for someone else, right? A child or a friend or a sibling, maybe. You have had the experience of caring for or comforting someone else, or wanting to care and comfort someone, haven't you? What would make this room easy for you care for others, to soothe and comfort them? Maybe a nice place to sit and listen to their troubles. Maybe gifts or special food to make them feel better. Are there any pictures in this room, of family or friends that you have comforted or cared for? Is there music or color? When you're in this room, you feel a sense of being a caring mother or father, a best friend, or a helper. This room puts your focus on making others feel better. When you have furnished the Sympathy for Others

room, open your eyes and make a few notes about what you put in there. Then allow yourself to be infused with the feeling of being able to nurture another human being and be in a satisfying relationship with them. ...

Now that you've finished furnishing all of your 8 state rooms, step out into your hallway for a final time. Walk very slowly past each door. As you do, you realize you can remember the look, and even more the feeling, of each room you pass. Sympathy for others, and mastery for others. Sympathy for self and mastery for self. Conforming and rebellious. All the way back to Telic and paratelic.

Now that you have furnished all of these state rooms in your mind, if you want to get into one of the motivational states, you can in your imagination walk up the corridor to the room that represents that state and enter into it. The objects, sounds, colors, furniture, and feel of the room in your imagination will pull you into experiencing that state. So you can confidently stack your reminder notecards together, and begin to focus back on the real world, knowing that your state rooms are never more than a thought away.

## **APPENDIX M**

### **RT STATE PROMPTS**



## RT State Prompts

Using your notecard to remind you, I'd like you to mentally put yourself into your "telic room." Remember, this is where you feel serious and goal oriented. Once you feel you've reached that state of mind, I'd like you to spend the next five minutes, writing about how your most traumatic experience has affected or will affect your future. Use this time to really analyze the experience from a serious point of view.

I'd like you to recall your "paratelic room" now, the room where you feel playful and at ease, and where you can really be in the moment. Then, for the next five minutes write about your traumatic experience in a way that is enjoyable, for example in the style of a novelist who wants to entertain and even excite people.

Now, I'd like you to mentally go into your "conforming room." In this room, you feel as if it is best to follow the rules and do what you are expected to do. Now, for the next five minutes, I'd like you to write about this traumatic experience in a way that meets the expectations of others, by describing what happened and your feelings, in a way that will not surprise other people, but that they can easily understand.

If you like, now you could take yourself mentally into your "rebellious room." This is the room where you feel like being just you, completely free from other people's expectations, and breaking the "rules" if that feels right to you. So for about the next five minutes, maybe you'd like to write about your traumatic experience in a way that maybe other people wouldn't understand or expect. You can use this time to write and just feel however you feel, regardless of what other people might think.

Now, I'd like you to recall your "Mastery for Self" room. This is the room where you feel powerful and in control – of yourself, of others, of your life. For the next five

minutes, write about the control you do have over your traumatic experience or what you might learn from it – whether you recall having control in the moment, or how you have control over its effects or your reactions now.

Now, mentally move down to your “Mastery for Others” room. This is the room where you are concerned with other people having control over something or being powerful. For the next five minutes, use this writing time to “speak” to someone else who was impacted by this traumatic event. This may be someone else who was involved or who has been affected just by knowing you. Use this time to teach them or coach them on how they can be in control of the effects of this event.

This time, recall your “Sympathy for Others” room. Remember, this is the room where you are concerned with building and maintaining close relationships, where you are focused on someone else and their feelings. For the next five minutes, write to someone else, maybe the same person as the last prompt, or someone different. Express your concern for what they are going through, extend your sympathy to them, say what you can to comfort or soothe them, and to show them that you really care about your relationship with them.

Lastly, mentally step into your “Sympathy for Self” room. In this room, you are concerned about yourself, and making yourself feel comfortable and cared for. For the next five minutes, use this time to soothe yourself. Be sympathetic, honoring all your feelings. Recognize that this is time for you to take care of you; you might also invite others to care for you.