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Personality style and psychological reactance:  
Theory confirmation and empirical prediction of  
reactant personalities

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PERSONALITY STYLE AND PSYCHOLOGICAL REACTANCE:  
THEORY CONFIRMATION AND EMPIRICAL PREDICTION  
OF REACTANT PERSONALITIES

by

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

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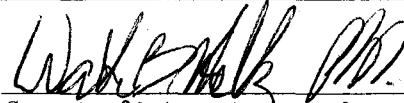
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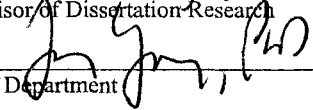
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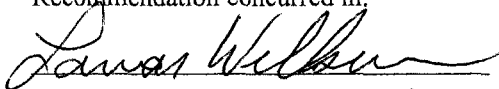
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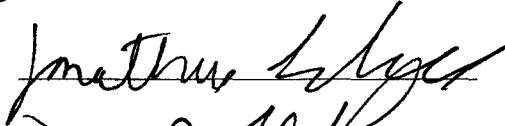
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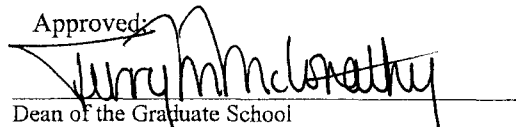
  
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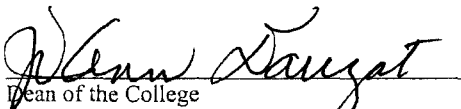
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## Abstract

Psychological reactance (reactance) is a construct that has begun to attract attention in the past few decades. Reactance is the tendency of a person to react in some way to protect personal freedoms from real or perceived threats (Brehm, 1966; Brehm & Brehm, 1981). Current theorizing and research suggest that reactance is a characteristic related to an interaction between the situation and transient variables such as perceptions of self or available alternatives (Brehm, 1976; Cherulnik & Citrin, 1974; Hannah, Hannah, & Wattie, 1976). Current research and theory indicates that psychological reactance is likely characterological in nature and is more of a characteristic of the person than of the situation (Brehm & Brehm, 1981; Buboltz, Woller, & Pepper, 1999; Dowd & Wallbrown, 1993; Dowd, Wallbrown, Sanders, & Yesenosky, 1994; Seemann, Buboltz, Thomas, Beatty, & Jenkins, 2001). This research has primarily involved trait-factor personality constructs, and only recently has personality style been investigated with respect to psychological reactance (Buboltz, Thomas, Williams, Seemann, Soper, & Woller, in press). The current study focused testing predictions from a theoretical model and from an empirical standpoint based on the existing body of knowledge regarding reactant behavior. A population of male, medium-security prison inmates was sampled. A modified version of the theoretical model of personality and psychological reactance proposed by Huck (1998) was tested with six formal hypotheses, and two hypotheses predicted specific MCMI-III personality scale elevations based on level of psychological reactance (high, moderate, or low). In addition, one hypothesis tested for differences in psychological reactance based on race, and another hypothesis tested the prediction that male prison inmates would demonstrate higher levels of psychological reactance than college students. Participants completed the Therapeutic Reactance Scale (TRS; Dowd, et al., 1991), the Millon Clinical Multiaxial Inventory-III (MCMI-III,

Millon, et al., 1997), and a demographic data sheet. A total of 438 participants were retained in the current study. Hypotheses 1 and 2 were not supported, indicating that there is no significant difference in obtained TRS total scores between African-American and Caucasian inmates in the current sample, and that there is no significant difference in levels of psychological reactance between inmates in the current sample and an archive sample of college students. A stepwise multiple regression was conducted to test the theoretical predictions of hypotheses 3 through 8.  $R^2 = .311$  with an adjusted  $R^2$  of .306;  $F(3, 434) = 65.233, p < .001$ . Of the 14 MCMI-III scales entered into the regression, the aggressive ([sadistic], hereafter, aggressive) ( $\beta = .290, p < .001$ ), paranoid ( $\beta = .277, p < .001$ ), and borderline ( $\beta = .106, p < .039$ ) scales emerged as significant predictors, partially supporting hypothesis 5 and fully supporting hypotheses 7 and 8. Hypotheses 3 and 4 were not supported. A MANOVA was conducted to test hypotheses 9 and 10 with level of reactance as the independent variable. A priori comparisons found strong support for hypothesis 9; the passive-aggressive, aggressive, and antisocial personality styles demonstrated a positive relationship with psychological reactance, and the mean MCMI-III scores for these constructs are significantly different given the level of psychological reactance. Hypothesis 10 predicted a negative relationship between the dependent, avoidant, and schizoid personality styles; this hypothesis not only failed to find support, but the opposite results were obtained.

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## CHAPTER 1

### Introduction

Psychological reactance (reactance) is a construct that has begun to attract attention in the past few decades. Reactance is a person's tendency to react in some way to protect personal freedoms from real or perceived threats. Many studies have focused on the nature of reactance in terms of observed behaviors and behavioral tendencies of the highly reactant individual (Brehm, 1966; Dowd, Milne, & Wise, 1991; Dowd & Sanders, 1994; Fogarty, 1997; Hockenberry & Billingham, 1993; Hong & Page, 1989; Hong, Giannakopoulos, Liang, & Williams, 1994; Joubert, 1990; Seibel, & Dowd, 1999). Other studies have focused on defining the reactance construct in terms of motivational variables and cognitive style as well as correlates with other known measures of behavior, or normal personality variables (Brehm & Brehm, 1981; Buboltz, Woller, & Pepper, 1999; Dowd & Wallbrown, 1993; Dowd, Wallbrown, Sanders, & Yesenosky, 1994). An overarching theme of many of these efforts is that reactance is characterological in nature. Previous studies have provided strong inferential and empirical support for the characterological nature of reactance but have not concretely defined reactant behavior in terms of normal personality.

Brehm (1966) proposed psychological reactance as a motivational force that drives an individual to restore lost freedoms or protect oneself from a perceived potential loss of personal freedoms; essentially, the highly reactant person is constantly guarding against loss of personal autonomy. Brehm and Brehm (1981) updated reactance theory research, indicating that psychological reactance was not a shared phenomenon that was governed by the situation but was rather an aspect of the individual's character. These authors also indicated that reactance was strongly grounded in a desire to maintain control over personal freedoms.

Psychological reactance is a complex phenomenon and not easily described or understood; the current state of the nomological net for psychological reactance is far from complete. As the following literature review will demonstrate, strong support for reactance as a characterological variable has been found, but specific definitions concerning the relationship between reactance and normal personality are elusive. Defining reactance in terms of normal personality is an important undertaking; psychological reactance has applications beyond academic curiosity. Dowd (1999) suggests that psychological reactance is an important variable in the therapy process; he found clients high in psychological reactance are at risk of terminating therapy early or not realizing the full potential benefit of the counseling relationship. S. Brehm (1976), a major psychological reactance theorist, relates reactance to the concept of therapeutic resistance. Conceptualizing a difficult client as reactant instead of resistant gives the therapist specific options and necessary feedback on how to overcome the difficulties in order to achieve client gains. Clearly the psychological reactance variable has great potential importance and, as the following literature review will demonstrate.

Psychological reactance has been identified as potentially important in areas other than counseling; for example, reactance has been posed as a potential explanation for medical noncompliance (Fogarty, 1997; Fogarty & Youngs, 2001). As the following literature review will highlight, psychological reactance is an interesting and potentially important variable that touches many areas of human functioning, including interpersonal relationships, consumer behavior, workplace/occupational behavior, marital satisfaction, management of inmate behavior, and several other areas of interest to the behavioral scientist. Defining the nature of psychological reactance in terms of personality and individual functioning is of great importance to professionals in many settings. Dowd, (1999) has demonstrated that psychological reactance

is a mediating variable in therapy; Fogarty (1997) suggested that an understanding of reactance could increase patient compliance with physicians' orders. The current study focuses on expanding the definition of psychological reactance in terms of normal personality style, generalizing prior reactance research to an inmate population, and confirming a modified version of Huck's (1998) theoretical model of psychological reactance and normal personality.

### *Statement of the Problem*

Prior research and updated theoretical formulations clearly indicate that psychological reactance is an individual differences variable (Brehm & Brehm, 1981; Buboltz, et al., 1999; Buboltz, et al., in press; Dowd & Wallbrown, 1993; Dowd, et al., 1994; Huck, 1998; Seemann, Buboltz, Thomas, Beatty, & Jenkins, 2001; Seemann, et al., under review). There are still many unanswered questions regarding the characterological nature of psychological reactance. The concept of personality style is a specific question for investigation. Psychological reactance is a complex construct and likely will not be completely explained by a strict trait-factor approach to personality assessment. The strongest common thread shared by previous psychological reactance and personality studies is the obtained behaviors or motivational characteristics displayed by a person with a high level of psychological reactance. While several studies have identified specific traits associated with high levels of psychological reactance (Buboltz, et al., 1999; Buboltz, et al., in press; Dowd & Wallbrown, 1993; Dowd, et al., 1994; Huck, 1998; Seemann, et al., 2001), some of these behaviors may be considered mutually exclusive. Seemann, et al. (2001) and Seemann, et al. (under review) suggested the possibility of types of reactant motivation, or clusters of traits that characterize an individual's specific expression of reactant motivation.



Huck's (1998) theoretical grounding of psychological reactance within Millon's (1969, 1981, 1984, 1994, 1995) theory of normal personality and psychopathology (Millon's typology) greatly expanded the understanding of psychological reactance as an individual differences phenomenon, but not all of his predictions were met. His approach to establishing a theoretical framework relied heavily on theoretical constructs and less on observed clusters of behavior; Huck's (1998) predictions, being purely driven by theory, included several combinations of otherwise mutually-exclusive elements. A given personality style, for example, may be characterized as active and dependent; according to Huck's predictions, this personality style should differentially predict both high levels (the active component) and low levels (the dependent component) of psychological reactance. Clearly, this is not possible.

Huck's (1998) grounding of psychological reactance within Millon's (1969, 1981, 1984, 1994, 1995) typology is indeed insightful; in this author's opinion, one expansion to his prediction needs to be made, namely that not all components of personality style necessarily have equal levels of predictive weight. For example, it is possible that a dependent (versus not dependent) style will predict low levels of reactance and that an active (as opposed to passive) style will predict high levels, just as Huck (1998) theorized, but it is also possible that, for example, the active component is dominant, so that an active style will predict high levels of reactance, even if the other components are associated with lower levels of psychological reactance. A confirmation of Huck's (1998) theory with such a structural modification in mind would likely further advance the predictive power of Huck's (1998) model by resolving the above stated issue of conflicting predictions.

As noted above, personality variables have been differentially associated with psychological reactance, and predictive relationships have been both speculated and

investigated. A confirmation of the relationship between personality style and psychological reactance is the next logical step. Specific predictions can be made based on the observed behavioral characteristics of known, quantified personality styles. Such predictions would potentially allow confirmation of past work for grounding psychological reactance in terms of personality and would allow the investigation of hypothesized types of reactant motivation or behavior. The examination of personality style, as opposed to a specific set of traits, is the next logical step in establishing the nomological net for psychological reactance. Personality styles that are found to be closely related to psychological reactance would also provide specific information of great utility in a number of settings, such as counseling/therapy, medical treatment, and administration/management, to name a few.

Psychological reactance has been chiefly investigated using college student populations; only a few studies have been conducted with clinical samples. Since psychological reactance is orientation toward freedom and control, research with inmate populations would likely generate useful information and valuable research data. A common criticism of research in psychology is its dependence on college student samples and the questionable generality of research findings that result from work with university populations (Prochaska & Norcross, 1999). Research with an inmate sample would expand current research and reduce earlier criticism. The generality of previous findings could be established outside of a university environment psychological reactance theory likely would have great utility in managing inmate populations and in the delivery of psychological, medical, and educational services within a correctional setting.

Multiculturalism and cross-cultural counseling competencies refinement of are increasing important trends in applied psychology research and practice that will likely endure.

Psychological reactance, as a human phenomenon, is poorly defined in terms of

multiculturalism. This is possibly because diverse groups do not demonstrate similar levels of psychological reactance and it is also likely that the expression of reactant motivation differs in some degree from group to group. Seemann, et al. (under review) demonstrated a mild effect size for the significant difference between Caucasians and African-Americans in psychological reactance levels. To date, this is the only study to examine such differences specifically and to propose a causative mechanism. Further research to confirm those findings is warranted. Seemann, et al. (under review) conducted their study with large sample of college students; as noted above, generalizing results from a student sample to clinical practice has had limited utility. Research with a clinical sample would answer the question of generality from one population to the other and would have potential utility in terms of both theoretical development and potential for application in a wide variety of settings.

In summary, the present study would address several areas important to the nomological development of psychological reactance. The current research in psychological reactance has established a well-developed but incomplete nomological net, and the next logical step is to refine the definition of the reactant individual in terms of personality style. This study will test specific the predictions concerning the generality of reactance from a college student population to a clinical sample of inmates, types of reactant behavior based on personality style, and confirmation of a theoretical model of psychological reactance. Psychological reactance has been demonstrated to be largely characterological in nature (Brehm & Brehm, 1981; Dowd, 1999; Dowd, et al., 1994; Seemann, et al., under review). Individuals who demonstrate higher levels of psychological reactance tend to have specific personality traits in common; these traits can be organized into logical groups. Individuals with these specific patterns of behavior, or personality styles, likely will demonstrate higher levels of psychological reactance than those

who demonstrate clusters of behaviors found in the past research to be unrelated to psychological reactance.

### *Justification for the Study*

Psychological reactance theory found its first area of application in counseling/therapy when Brehm (1976) related psychological reactance to therapeutic resistance. Later studies (Dowd, 1999; Dowd & Sanders, 1994; Moor & Sellwood, 2000) provided further development of the reactance construct as a variable that likely plays a mediating role in therapy. Dowd (1999) described reactant behavior as potentially disruptive to the therapeutic process; reactant clients are less likely to comply with interventions, see gains from therapy, and are at increased risk for early termination of therapy. Understanding psychological reactance and its relationship to normal personality would give the therapist/counselor valuable information concerning the underlying variables driving reactant motivation. This information would allow the skilled counselor to develop interventions and structure therapy in such a way as to avoid undesirable outcomes, i.e. early termination of therapy by the client. Information that the client is highly reactant is of little benefit to the therapist or client. Coupled with the understanding that a reactant client is rigid, untrusting, and independent, information concerning client reactance has greater utility. This study would expand that description and facilitate the therapist's understanding of the reactant individual's personality as an integrated, systemic pattern of behavior (personal style) and not merely as a set of descriptive traits.

Psychological reactance is a variable conceptualized by a desire for control, a need for freedom, and an intolerance for conditions of threat (Brehm & Brehm, 1981; Fogarty & Youngs, 2000). This study would attempt to generalize and apply the previous control/reactance research to a prison population. Such a generalization serves two important functions. It allows for

confirmation of college sample findings with a decidedly unrelated population, and it further suggests applicability of results with a population in which reactance theory likely could be applied with appreciable results. Inmate management and service delivery likely could be greatly facilitated by understanding the reactant individual's need for control and an individual's response to perceived or potential loss of personal freedoms.

The response to perceived or potential loss of freedoms can have significant consequences for individuals. For example, a soldier who goes AWOL from the military can be seen as attempting to regain access to lost freedoms. This soldier may be a highly reactant individual unsuited for highly structured environments. In addition, it is also possible that highly reactant inmates in all levels of correctional facilities are more likely to violate rules and be denied good time credit towards their sentences. Unlike the potential military volunteer, the inmate has little choice concerning the structured environment in which he or she will live. Both of these areas are of great potential interest, yet research to date on reactance and rule compliance in highly structured settings is lacking.

Dowd and Wallrown (1993) noted that there are many client-specific variables that impact client compliance in the counseling relationship. These authors note that the reactance construct shows promise in explaining differential client performance and outcome in therapy. Dowd and Sanders (1994) found support for the hypothesis that highly reactant clients often acquire the label of difficult and produce generally poorer outcomes in therapy as opposed to clients who demonstrate a moderate or low level of reactance. Fogarty (1997) noted that the reactance construct may explain noncompliance in medical settings. Additionally, Hockenberry and Billingham (1993) found that both individuals in mutually violent relationships had significantly higher reactance scores than did individuals in nonviolent relationships. These

authors also found that highly reactant persons may be more protective of their personal freedoms and that interpersonal control, as related to psychological reactance, may be an important factor in violent relationships.

Brehm's (1966) conceptualization of reactance yielded a construct which was situationally specific in nature and was based more on the characteristics of the situation than the individual differences of the person perceiving the situation. As previously mentioned, however, subsequent research has suggested that the reactance construct has characterological elements and may even be considered a personality trait (Brehm & Brehm, 1981). This study has great potential significance for advancing the grounding of psychological reactance in terms of personality and expand the nomological net of psychological reactance to include both clinical and operational (normal) elements of personality style.

#### *Review of the Literature*

Psychological reactance (reactance) is a construct that has attracted increasing attention in the past few decades. Essentially, reactant arousal is a person's motivational state to protect and/or restore personal freedoms from real or perceived threats (J. Brehm, 1966; S. Brehm, 1974). Jack Brehm (1966) originally proposed a theory of psychological reactance within the context of social psychology. Reactance has since then become a variable of interest in several clinical and applied areas, such as psychotherapy process and outcome research (Courchaine, Loucka, & Dowd, 1995; Dowd, 1996; Hunsely, 1997; Moore, Sellwood, & Sterling, 2000; Parker, 1997), career counseling and vocational assessment (Buboltz, Woller, & Pepper, 1999), noncompliance with medical directives, treatment, and advice (Fogarty, 1997; Forgarty & Youngs, 2001), alcohol and drug abuse prevention awareness programming and effectiveness (Bensely & Wu, 1991; Gilbert, 1998), domestic violence and abuse (Hockenberry & Billingham,

1993), marital satisfaction (Derbyshire, 1997); consumer behavior (Clee & Wicklund, 1980), and to selection, promotion, and retention issues in the workplace (Vrugt, 1992). Psychological reactance has also attracted interest in more basic research areas, such as self-esteem, self-efficacy, and narcissism (Hellman & McMillin, 1997; Joubert, 1990; Joubert, 1992).

### *Foundations of Psychological Reactance*

Originally formulated as an ubiquitous phenomenon dependent on situational factors, J. Brehm (1966) described psychological reactance as the mechanism by which an individual protects personal freedoms, called free behaviors, from the threat of loss. J. Brehm (1966), S. Brehm (1974), and Brehm and Brehm (1981) noted that the concept of free behaviors and control over those behaviors is central to psychological reactance theory. These authors assume that all individuals have a core behavioral set to which they feel entitled. For the purposes of psychological reactance theory, a behavior is anything a person is capable of doing (working, thinking, playing the harmonica, etc.) as long as it is reasonably possible. The concept of control over these free behaviors is also important to psychological reactance theory; a person experiences the motivated state of reactant arousal to essentially regain control over lost or threatened free behaviors.

The concepts of free behaviors and the need to control those free behaviors are inexorably intertwined with respect to psychological reactance theory. S. Brehm (1976) stated that two aspects of the importance of freedom (and control over that freedom) should be considered in reactance theory. The first is that a freedom, or free behavior, must have a “unique instrumental value” (p. 17), or the (relatively) unique power to satisfy a need or operant condition. If a behavior is unique in its ability to satisfy a need, the individual will be highly motivated to protect that behavior should it encounter threat. A possible example could be seen

in the need to protect one's home from crime; if the individual perceives that owning a handgun is the only way to meet this need, than the reactant individual will likely vigorously defend the right to do so. Even if other means are available to meet this need (home security system, guard dog, moving to the middle of Wyoming) the person will still experience reactant arousal if that person perceives other options as insufficient or trivial. If, on the other hand, a thousand alternatives to the threatened behavior are available, the loss of one behavior is of little consequence. If viable alternatives are readily available, and are perceived to be equally valid, reactant arousal will be low.

The second aspect to be considered is the importance of the need fulfilled by the behavior or the set of behaviors. If the need is trivial, the motivation to protect the behaviors that satisfy the need will be correspondingly less significant. If the need is critical, however, the reactant response will likely be significant, even if several options exist for meeting this specific need. S. Brehm (1976) integrated these two considerations within reactance theory by describing the conditions under which the greatest magnitude of reactance would be provoked. If a unique behavior exists to meet a critical or a pressing need, and that behavior is threatened, and the threat is perceived to be immediate, a greater magnitude of reactant motivation can be expected than under other conditions. This motivational arousal can take many forms; the quality of reactant arousal will be discussed later in this section.

As will be noted later in the discussion of psychological reactance theory and research, reactant responses can be provoked by threat to seemingly insignificant free behaviors or by threatening behaviors that control trivial needs. S. Brehm (1976) suggested a further consideration with respect to the magnitude and quality of reactant motivational arousal, namely the interaction between free behaviors or the association between a behavior that meets a



significant need and a behavior that is seemingly trivial. In some cases, a trivial behavior may be related to a unique or important free behavior; restricting that trivial behavior may be seen by the individual as a de facto restriction or threat directed toward the important behavior. If this is the case, reactant motivational arousal is engaged as if the important behavior itself had been threatened directly. S. Brehm (1976) stated that reactant arousal of the same quality and magnitude as a direct threat is possible when a related but relatively unimportant free behavior is threatened. The threatened loss of a relatively unimportant behavior can engage a response of disproportionate magnitude because other behaviors of greater importance are implicated by association.

Psychological reactance is a social phenomenon that does not exist because of self-imposed restrictions; the control to lift those restrictions is always present. A perceived external threat, real or imagined, is a necessary component of reactant motivation. J. Brehm (1966) and S. Brehm (1976) stated that reactant motivation, as a social phenomenon, can be engaged even if direct threat is absent. If an individual witnesses another person experience the loss of a free behavior, the witness may experience reactant arousal if the threatened freedom is important to the witness. In terms of social learning theory, the threat of loss is modeled by the subject for the witness. The witness then learns vicariously that a threat exists to a given behavior or set of behaviors, even if the witness did not experience the threat personally. The witness will likely experience reactant arousal even if the subject of the threat finds the restriction to be trivial. For example, forbidding a 1960's flower child from enlisting in the infantry because of a height restriction is likely irrelevant to the flower child, but the person with a long family history of career soldiers would experience reactant arousal if that person were the same height as the flower child, even if that person was too young to enlist at the time.

Early theory development assumed that psychological reactance was a situation-specific variable, one that existed uniformly across people (J. Brehm, 1966; S. Brehm, 1976). Theoretically, two people with similar core free behavior sets and similar needs to control those free behaviors would experience a similar magnitude of reactant motivation, given a specific threat to personal freedom. Early research followed the assumption that psychological reactance was a situational characteristic and a personality factor. Cherulnik and Citrin (1974) assumed that psychological reactance was a variable normally distributed across people and that reactant motivation was activated by the characteristics of the situation and modulated by information processing. These authors found that reactant arousal was dependent on the mode of elimination of freedom (personal or impersonal) and the individual's locus of control (internal or external). Reactant motivation was assumed to be a dichotomous phenomenon where subjects chose from either a reactant or non-reactant set of options after experiencing imposed restriction on a specific free behavior. Results indicated that internals demonstrated reactant arousal when presented with a personal elimination of freedom while externals demonstrated reactance when presented with an impersonal elimination of freedom. The authors attributed this choice behavior, and the subsequent expression of reactant motivation, to cognitive orientation.

Hannah, Hannah, and Wattie (1976) assumed that psychological reactance would manifest in a qualitatively similar manner across participants in an experiment on choice behavior. These authors found that subjects displayed reactant motivation by changing their ratings on an aesthetic preferences scale after being told that a personality test would predict, with varying degrees of accuracy, the ratings of each individual. Control subjects (who received no feedback from the supposed personality test) did not change their ratings, but experimental subjects reordered their choices where the predicted selections were devalued and other

selections, originally rated lower, were assigned greater preference if they were not predicted by the personality test. The personality test was a sham intervention used to encourage reactant motivation. The authors' predictions were validated; all participants were assumed to display reactant behavior if freedom was restricted by essentially telling the participants that choice followed personality and not their actual free-will preferences.

S. Brehm and Weinraub (1979) grounded psychological reactance in terms of development and implied the formation of gender differences in reactant motivation. In this study, psychological reactance was assumed to be a uniform tendency mediated by the situation and by gender. Two-year old boys and girls had access to two sets of objects separated by a large or small barrier in the experimental condition. Object sets were either similar or dissimilar. Boys directed their initial approach to the objects behind the barrier if those objects were dissimilar and the barrier was large (and had to be navigated); girls tended to prefer the more accessible objects initially. For boys, there was no clear preference when the barrier was small (and was supposedly not a threat to freedom of choice). In this study, reactant motivation was based on the assumption that the small barrier, while a nuisance, did not restrict freedom to access the second set of objects, whereas the large barrier did pose such a restriction. In this case, the freedom to access unique objects behind the barrier also encouraged reactant motivation.

#### *Psychological Reactance and Control*

Throughout the theoretical formulations and empirical research that postulates and defines psychological reactance and reactant motivation, the theme of control appears as a central thread. Control is expressed specifically as the desire to maintain the freedom to engage in free behaviors (J. Brehm, 1966; S. Brehm, 1976; Brehm & Brehm, 1981; Buboltz, Seemann, & Thomas, under review; Seemann, Buboltz, & Thomas, 2000, June; Seltzer, 1984; Strube &

Carol, 1984). Reactant motivation's end goal is essentially to reestablish control over lost or threatened free behaviors. This control can include the option to engage in a given behavior (controlling access to that behavior), controlling the situations in which a given behavior may or may not be expressed, or controlling the outcome of an undesirable situation, even if the negative events themselves are beyond the person's influence. This desire for control serves as not only a core aspect of reactance, but also give direction and form to the reactant response.

Psychological reactance was determined by Seltzer (1983) to play a part in decision-making in a forced-choice situation with no clear positive outcome. The assumption is that the participants had to choose between alternatives that were aversive; the individual had to decide which was the least aversive of the conditions. Participants (undergraduate students) were asked to assume they had succumbed to the temptation to cheat in a course. They were then presented with a series of alternatives for how to manage the situation, one of which was a strict set of conditions offered by a demanding authority figure. Seltzer (1983) found that reactant motivation played a part in decision-making; a large number of the students did not accept the authority's recommendation (which came with an apparent implied threat if that option was not selected) and only a few either endorsed the authority's choice or changed a previous choice to that of the authority. The act of simply deciding was found to be anxiety-reducing among participants, who made their own decisions in spite of the strict authority's recommendation. Machiavellianism and individual self-efficacy were also postulated to account for other unique aspects of the variance in this study.

Strube and Werner (1984) found that inefficient decision-making occurs under conditions conducive to reactant motivation. Participants were asked to relinquish control in a task to a partner who was rated at the same skill level or as superior to the individual participant.

Participants completed a prior task and received feedback as to their skill level (adequate or inadequate). Those deemed inadequate experienced greater difficulty in relinquishing control to superior partners. In this study, the reactance-evoking condition was a rating of inferior (threat to personal sense of control over task) while having a superior partner (external threat from someone who is supposedly better or more competent). On its face, the appropriate decision for a person with an inadequate skill level would be to surrender part or all of the subsequent task to a colleague with greater skills, but the experimenters observed that the participants in this condition relinquished less control than those in other groups.

Mulry, Fleming, and Gottschalk, (1994) found that self-control was relatively unrelated to psychological reactance, as opposed to control over situational factors and access to free behaviors noted above. In this study, academic procrastinators were assessed for potential psychological reactance and assigned to low- and high trait reactance groups. Self-control was assessed and treatment for procrastination was delivered to both groups in one of two forms, either via paradoxical intervention or self control enhancement training. Results, in terms of diminished academic procrastination, were assessed by increased effective study time. Low reactance participants were found to be receptive to either intervention while high reactance clients showed little change due to either treatment category. This study's results stress two important findings, namely that control is not the only core theme of psychological reactance and that reactant control behavior is focused outside of the self. This study deviates from many of those noted above in that it divides reactance into trait categories (high versus low) and assumes that reactant motivation is a trait behavior, or an aspect of the person and not entirely an aspect of the situation.

The general implications noted above for Mulry, et al. (1984) were supported by the findings of Seemann, Buboltz, and Thomas (2000). These authors found that aspects of desirability of control, as measured by the Desirability of Control Scale (DCS, Burger & Cooper, 1979) were significantly related to trait reactance. This study assumed that psychological reactance was a personality trait as opposed to a situational construct of uniform nature across individuals. Results indicated that individuals higher in psychological reactance (as measured by the Therapeutic Reactance Scale, or TRS, Dowd, Milne, & Wise, 1991, described below) obtained significantly higher scores on the DCS factors of General Desire for Control, Preparation/Prevention Control, and Avoidance of Dependence. The elevations of these scales accounted for approximately 31.7% of the overall variance in psychological reactance scores as measured by the TRS. These results indicated that control is a significant factor in reactant behavior, but several other factors likely account for significant aspects of the overall variance. Social desirability, as measured by the Marlowe-Crowne Social Desirability Scale (SDS, Crowne & Marlowe, 1960) also demonstrated a significant positive relationship with psychological reactance, but the effect size for social desirability alone was minimal.

Fogarty (1997) stated that reactant behavior can occur in response to a direct threat to a person's perceived free behavior (control) or in response to a vicarious threat, namely one occurring after someone else's behavior has been threatened or restricted or after a less important behavior has been impacted. This author indicated that control not only extends to the free behavior directly, but also to related behaviors and situations in which free behaviors may be exercised to meet one's needs. Threatening a free behavior may evoke a reactant response, but also threatening to remove access to the environmental conditions in which that behavior is exercised will also likely encourage reactant motivation. As J. Brehm (1966) and S. Brehm

(1976) postulated, a reactant response may occur when a relatively unimportant behavior is threatened if that behavior is related to or acts as a precursor for a highly regarded free behavior. Control, as discussed by these authors with regard to psychological reactance (Brehm & Brehm, 1981), extends to the settings in which a person's free behaviors are exercised, unimportant behaviors related to important free behaviors, and to the free behaviors themselves. Control is a mechanism for guaranteeing access to free behaviors.

It should be noted that control, in terms of psychological reactance, is different than power, especially in interpersonal relationships. Control, as a core aspect of reactance theory, appears to be focused on maintaining the option to engage in a personal free behavior. Power, on the other hand, can be seen as the need to assert one's will or authority over another person or set of interpersonal circumstances; threat conditions do not need to be present and the need to exercise power usually has instrumental motivation as a driving force (Christie & Geis, 1970). Derbyshire, (1997) addressed this issue and found that psychological reactance was related to power-constructs of dominance and authority but was itself not necessarily related to power. An untested supposition is that control and various aspects of power-seeking behavior account for similar variance aspects in psychological reactance, but control itself is more efficient in explanatory terms and power seems to be related only via control.

Derbyshire's (1997) study, along with the above-mentioned work of Seemann, Buboltz, and Thomas (2000) provided important information concerning the relationship between psychological reactance and control. Control is clearly central to psychological reactance, but it is only one component of reactant behavior. Control accounted for nearly a third of the variance in psychological reactance scores in Seemann, et al's (2000) study. Power, while distinct from control, still shares a close relationship with control behavior but is not necessarily in and of

itself a critical factor in psychological reactance scores (Derbyshire, 2000). This indicates that there are control behaviors that are unrelated to reactance while there are others that are central, some of which are distinct from power, some of which are not. Determining the distinction between the two is a subject for future research.

The studies noted above support the theoretical assertion that desirability of control is specifically linked to reactant motivation. As noted above, control is important in managing one's perceived freedoms in the environment and is both a proactive and reactive phenomenon with respect to psychological reactance. Control behavior is generally directed toward managing threat from the environment and maintaining one's freedom to exercise core free behaviors. Self control does not appear to be related to reactant motivation. Control, especially as measured by the DCS, displays aspects of a characterological trait as opposed to a uniform situational response. Psychological reactance, in terms of early theory, was assumed to be a function of the environment (J. Brehm, 1966; S. Brehm, 1976) and most prior research approached reactant motivation from this standpoint. J. Brehm and S. Brehm (1981) reformulated the fundamental nature of psychological reactance in light of their research and began to examine reactant behavior as more than a situation-dependent motivational state. These authors postulated that psychological reactance, with its core themes of control and freedom, may indeed be more of a personality or individual differences variable than was once believed.

#### *Reactance, Resistance, and Control in Therapy*

Desire for control is clearly one of the central constructs in psychological reactance and, because psychological reactance is related to a number of oppositional behaviors, reactance is likely an important variable within the therapeutic relationship (Beutler, 1979; Brehm & Brehm, 1981; Seemann, et al., 2000; Seibel & Dowd, 1999). Beutler (1979) suggested that psychological



reactance is strongly related to resistance in therapy and, as a trait variable, may likely play a role in mediating the outcome of therapy. The process of therapy, especially within some theoretical models, has been described as a power-sharing process or as the surrender of personal control to the therapist (Prochaska & Norcross, 1999). Reactant behavior is triggered by the actual or perceived loss of access to free behaviors (or control over when to engage in those behaviors). The process of change in therapy then may be perceived by the reactant client as threatening and reactant behavior, in the form of resistance to counseling/therapy, is likely to manifest.

Brehm (1976) suggested that psychological reactance and resistance in therapy are closely related, if not the same construct. She relates reactance to the descriptions of resistance in several major theoretical perspectives, including psychoanalysis, behavior modification, and paradoxical intent. In these models, reactant behavior leads to one specific point: the client, via resistance, is attempting to maintain control over his or her right to feel, behave, or believe as they see fit, even if some of those options are pathological. Brehm suggested addressing the reactant behavior openly by describing reactance theory and then engaging in a free discussion of the behavior in question. This would open a new set of alternatives and should both decrease observed reactance and provide an intervention tool for the next display of reactant behavior.

Seibel and Dowd (1999) conducted a study to verify empirically the effect of psychological reactance on the process and outcome of therapy; ninety client-counselor dyads participated. The clients completed measures of well-being and psychological reactance. The therapists charted their clients' progress and noted change in therapy and other important client behaviors, such as medication compliance, distancing, behaviors that foster therapeutic collaboration. The results of this study indicated that psychological reactance was strongly

associated with behaviors that hinder the process of therapy and weakly associated with compliance behaviors, behaviors that foster therapeutic collaboration, and negatively associated with global improvement. These authors note that clients high in psychological reactance did receive some benefit from therapy and that oppositional engagement, while frustrating to the therapist, appears to be better than no engagement at all. These findings highlight two important points, namely that client reactance level does have an impact on the process and outcome of therapy and that, while disrupted, reactant clients still see benefit from therapy. This second finding is critical as the implication exists that, if some benefit is achieved, the process of therapy could be modified to account for reactant behavior and thus improve gains for the reactant client. However, it is likely that a greater understanding of psychological reactance as a personality variable is necessary for this to be accomplished.

Psychological reactance also likely mediates the perception of therapeutic discourse between the client and the therapist. Courchaine, Loucka, and Dowd (1995) conducted a study in which two groups of undergraduate students (one rated as high in reactance, the other rated as low in reactance) listened to counselors give interpretations of specific client cases. The counselors were categorized according to high, moderate, and low discrepancy conditions; discrepancy is defined as the degree of agreement between the client's beliefs about his or her distress and the therapist's conceptualization of the case. Interpretations were issues in one of two conditions, namely tentative or absolute (the conviction of the therapist to his or her point of view). The major finding of this study was that the high reactance clients viewed the working alliance as stronger if the interpretations were absolute while low reactance participants viewed the working alliance as stronger with tentative interpretations. Low reactance participants consistently tended to perceive the therapist in a more positive light than the high reactance

participants. An unexpected effect for gender was also noted, indicating that female participants tended to view the therapists more favorably than male participants.

While it is tempting to view resistance and reactance as the same construct, Dowd and Sanders (1994) indicated that these constructs, while related, are distinct. Reactance is a motivational force that is centered around maintaining or restoring lost or threatened personal freedoms. Resistance, from the perspective of the cognitive therapy literature, is centered around meaning structures; as a client struggles to interpret new information and old schemata are called into a sort of paradigmatic crisis, the person may retreat or screen out aspects of the environment to deal with these changes. These authors suggest that reactance can be used to overcome resistance in therapy. It should be noted that it is important to avoid value judgments concerning resistance/reactance; each is simply part of the process of therapy and must be addressed by the skilled counselor (Dowd, 1999).

Dowd and Sanders (1994) suggested that, if a client is low in reactance, using traditional compliance-based methods is adequate. A low-reactance client is likely to complete homework and practice exercises and other activities outside of therapy. The high reactance client, however, is not likely to comply with such directives. One clinical procedure for working with a high reactance client is a defiance-based approach in which the client's change occurs as he or she seeks to defy the counselor. Another suggestion is using the method of reframing; the client is helped to see that the behavior in question is actually restricting access to personal freedoms. In this case, psychological reactance may actually work for the process of therapy as the client reacts against his or her own behavior. A degree of insight is likely necessary for this second strategy, and a strong working alliance is critical to the success of treating the reactant client.

Dowd (1993, 1999) described reactance as an importance force in therapy and one that should be addressed in order to achieve maximal client gains. Reactance is important because behaviors that are often difficult to manage in therapy are strongly associated with psychological reactance and are disruptive to the processes of collaborative empiricism (Dowd, 1993) that is the foundation of cognitive therapy. Dowd (1993) suggested that reactance in therapy has several paradoxical elements, such as the self-elimination of alternatives in order to protect personal freedoms within therapy. Reactant clients will actually resist the process that is designed to give them a greater number of alternatives. Dowd (1993, 1999) stated that reactance is directly related to autonomy and somewhat related (via a curvilinear manner) to identity. Highly reactant clients likely have great difficulty in assimilating new information as it may be perceived as threatening to the sense of self. In this case, it is likely necessary to address the client's sense of identity directly, openly, and with sufficient flexibility that such an address does not spur the reactant client to disengage from therapy.

Clearly, psychological reactance is an important variable in therapy and, along with the distinct but related construct of resistance, psychological reactance has a strong role in mediating client perceptions of counseling/therapy and the process and outcome of therapy. As a client desires to maintain personal control, that client may be actually reducing his or her free behavior access instead of protecting it. While reactance clients do see some gain from therapy (as opposed to no therapy), the process could be improved by a greater understanding of the reactant client. This understanding of client reactance would allow counselors/therapists to craft interventions that would maximize the positive potential of client reactance; as noted above, highly reactant clients should not be labeled as bad or difficult; high levels of client reactance may actually work for the process of therapy in the hands of a creative counselor with a high

tolerance for frustration. As noted by the above authors, since reactance is probably a characterological variable, greater understanding of trait reactance is critical to successful implementation of strategies designed to reduce the negative impact of reactance within the counseling relationship.

### *Psychological Reactance as a Trait Variable*

As noted above, J. Brehm and S. Brehm (1981) expanded their theoretical conception of psychological reactance, in essence suggesting that it is characterological in nature and activated by environmental conditions. These authors discussed research that correlated reactant motivation with Type A behavior; individuals who were found to endorse Type A attitudes would demonstrate reactant behavior when faced with threat. These authors suggested that Type A individuals likely had a lower threat tolerance (or threshold) than Type B individuals, especially if the threat was specific in nature.

J. Brehm and S. Brehm (1981) also expanded on Cherulnik and Citrin's (1974) work and demonstrated that psychological reactance is strongly correlated with an internal locus of control. Cherulnik and Citrin (1974) found that reactant responses were demonstrated across subjects, but that subjects with an internal locus of control reacted to personal threats and those with an external locus of control reacted to impersonal threats. Cherulnik and Citrin's (1974) study assumed reactant motivation was a dichotomous choice; one either made a reactant response or one did not when faced with one of three conditions (personal threat, impersonal threat, or no threat). The control group demonstrated no change in ratings. J. Brehm and S. Brehm (1981) found that psychological reactance existed on a continuum (low, moderate, and high as opposed to an on-off dichotomy) because they were able to correlate reactant behavior with an internal locus of control, especially when the importance of the free behavior was high

and the magnitude of the threat was great. J. Brehm and S. Brehm (1981) then postulated that individuals have differing levels of reactance potential and that reactant behavior may be, at least in part, the result of individual characteristics as well as environmental activation.

More recent research has found strong support for the characterological nature of psychological reactance (Buboltz, et al., 1999; Dowd, Milne, & Wise, 1991; Dowd & Wallbrown, 1993; Dowd & Sanders, 1994; Seemann, et al., under review). Dowd and Wallbrown (1993) found that the reactant response was due to both individual characteristics and situational stimulus properties; a threat to free behavior must be present for reactant behavior to be overtly manifested. Reactant behavior can also manifest when the freedom to *not* do something is infringed; attempts to coax or coerce a person into doing something, even something they may normally feel free to do, may result in resistance/reactance (Fogarty, 1997), but this will vary across individuals.

In investigating the characterological nature of psychological reactance, Dowd and Wallbrown (1993) found a significant relationship between reactance and the variables measured by the Personality Research Form (PRF). These authors noted that prior research and theory had indicated that psychological reactance was partially an individual differences variable. Studies on preexisting levels of reactance and situationally-induced reactant motivation added confirmation that reactant motivation was due in part to the situation and in part to some aspect of the person. Dowd and Wallbrown's (1993) focus was to identify a motivational profile of the highly reactant person; if psychological reactance was characterological, then it would follow that persons with similar elevations on a measure of psychological reactance would have certain traits in common. The results of the authors' regression analyses indicated that characterological factors as assessed by the PRF accounted for 25%-46% of the variance in psychological

reactance scores. The motivational profile identified in this study indicated that highly reactant individuals are likely to be dominant, individualistic, aggressive, quick to take offense, and are unlikely to describe others or themselves in favorable terms. The reactant person, while not asocial, is likely to be a loner. Reactant individuals are also likely to seek a variety of experiences. These authors concluded that this motivational profile was a sound fit with the theoretical conception of a person who values freedom from perceived or actual restrictions.

Dowd, Wallbrown, Sanders and Yesenosky (1994) emphasized the importance of research aimed at establishing the relationships that exist between psychological reactance and other constructs as well as work that further clarifies and defines the nature of psychological reactance. To this end, these authors found a significant relationship between psychological reactance and the scales of the California Personality Inventory-Revised (CPI-R). The CPI-R (Gough, 1987) measures normal personality variables but was designed to reflect the sorts of descriptions given to personality factors and everyday behaviors by ordinary people. These scales, known as folk scales, assess and describe the kinds of behaviors that people see in daily life. According to the authors, their results reinforced and expanded on the description of the highly reactant individual in characterological terms. They found that the scales of the CPI-R accounted for 20%-29% of the overall variance in psychological reactance scores. The findings propose that the personality style of the psychologically reactant person would reflect little concern with making a good impression on others, low concern for social norms and mores, lower tolerance for others' beliefs, values, and goals, an inclination to express strong feelings, and a tendency to ruminate about personal problems and about the future. The highly reactant individual is one who is likely self-motivated and follows internal directives and goals, as opposed to goals or regulations imposed from an outside source. This conception of the general

personality style of the reactant individual is consonant with Dowd and Wallbrown's (1993) motivational profile; the findings of this study also supported the theoretical description of highly reactant individuals as dominant, individualistic people who value personal freedom and prefer social interaction on their own terms.

Buboltz, Woller, and Pepper (1999) found a significant relationship between Holland Code Type and psychological reactance. Holland Code Types identify areas of vocational interests, but strong arguments have been made that suggest Holland Code Types are also indicative of personality (Buboltz, et al., 1999). This study advanced the definition of the reactant individual by examining the occupational settings and work environments preferred by reactant individuals. These authors found that highly reactant individuals tended to be domineering, controlling, independent, persuasive, and aggressive. The authors also found that highly reactant individuals did not like confinement or social interactions and that they are likely to have a strong disregard for rules, regulations, and obligations. Psychological reactance was found to have a significant positive relationship with Enterprising and Investigative occupational environmental preferences and a strong negative relationship with preferences for Social occupational environments. This research reinforces the conception of the reactant individual as someone who is concerned about maintaining individual freedom and who dislikes the rules and regulations of others. These results also support Dowd and Wallbrown's (1993) findings that persons high in psychological reactance likely seek out variety of experiences. The unique contribution of this study is the generalization of the profile of the highly reactant individual to the social level of molarity.

Seemann, Buboltz, and Thomas (under review) furthered the definition of the personality characteristics that underlie psychological reactance. Previous research has used the PRF and the



CPI to establish a profile of the highly reactant individual in terms of motivational structure and normal personality, respectively. These authors regressed scores from the NEO Personality Inventory, Revised (NEO) onto a measure of psychological reactance. The authors chose the NEO because it is an objective measure of the popular five factor model (FFM) of personality. The FFM has been called an almost universal standard for personality assessment and research and is immensely popular (Ferguson & Patterson, 1998). The FFM provides information regarding normal personality in clear and unambiguous terms and is currently the most widely researched model of normal personality structure (Costa & McCrae, 1992). Three of the NEO's five domains (Agreeableness, Openness to Experience, and Extraversion) emerged as significant predictors of psychological reactance; these three scales also accounted for 26.3% of the variance in psychological reactance scores, a finding consistent with past research.

Agreeableness was found to have a strong negative relationship with psychological reactance and both Openness and Extraversion produced milder positive relationships. Further examination of the facet scales of each domain provided detailed description of personality factors related to psychological reactance. Highly reactant individuals are likely to be low in Agreeableness, a tendency that is expressed as a dislike for rules, regulations, imposed structure, and direct confrontation with others. These individuals are likely to be higher in Openness to Experience, as reflected by the reactant individual's tendency to be creative and contemplative. While higher in Extraversion, the reactant person is interpersonally distant and likely to express negative emotions. Reactant individuals are likely to be very assertive and excitement-seeking, both of which are also components of the NEO's Extraversion scale.

The prior literature has established a strong basis in theory and research for the characterological nature of psychological reactance. Further construct validity has been

established with other personality and individual differences variables. Joubert (1990) examined the relationship between reactance and a number of other variables including self-esteem, happiness, loneliness, conventional mores, hostility, fear of failure, and social acquiescence. He found that psychological reactance produced a strong positive correlation with the U.C.L.A. loneliness scale and was mildly related to hostility. His investigation also demonstrated negative correlations between reactance and both the results of the Coopersmith Self-Esteem Scale and measures of conventional mores.

Psychological reactance was found to be a relatively stable characteristic in undergraduates when the effect of alcohol abuse prevention messages on alcohol consumption was examined (Bensley & Wu, 1991). The authors explained the paradoxical effect of increased rates of alcohol consumption following strong anti-drinking messages for many participants in terms of reactant behavior. In a similar study, Gilbert (1998) found that psychological reactance may be associated with college students' attitudes with respect to alcohol consumption, but no main effect for reactance was found. In this study the author provided a group of college students with an anti-drinking message designed to elicit a reactant response. Control conditions received no such message. Specific attitudinal responses reported on a questionnaire were correlated with psychological reactance, but no difference in post-questionnaire (post message) alcohol use could be attributed to reactance after prior alcohol use had been factored out. Still somewhat vague and incomplete, the evidence for considering psychological reactance to be characterological in nature is mounting. The reactance construct has been investigated in a number of arenas and likely may be a factor of some importance in many others.

#### *The Measurement of Psychological Reactance*

Psychological reactance is clearly a complex construct that is grounded in individual difference variables and is activated by the stimulus properties of the situation. The previous research cited above has established psychological reactance as a phenomenon that occurs across individuals with differing magnitudes of expression. Psychological reactance potential has been measured by using artificial interpersonal conditions of threat (Cherulnik & Citrin, 1974; T. Hannah, E. Hannah, and Wattie, 1975; Seltzer, 1983), physical obstacles in the environment (Brehm & Weinraub, 1977), direct attempts by an authority to influence the target person's behavior (Fogarty, 1997; Fogarty & Youngs, 2000; Graybar, Antonuccio, Boutilier, & Varble, 1989; Imajo, 1995), and via self-report on a paper and pencil inventory (Buboltz, et al., 1999, Buboltz, et al., in press; Dowd, Milne, & Wise, 1991; Dowd & Wallrown, 1993; Hockenberry & Billingham, 1993; Hong & Faedda, 1996; Seemann, et al., under review). The majority of the current work concerning psychological reactance, especially in the area of the relationship between psychological reactance and normal personality, has relied on self-report inventories (Buboltz, et al., 1999; Buboltz, et al., in press; Dowd, et al., 1991; Dowd & Wallbrown, 1993; Dowd & Sanders, 1994; Seemann, et al., under review). The prior research cited above provides strong grounding for psychological reactance in terms of individual differences; this implies that reactant motivation itself likely falls on a continuum and is not a dichotomous on/off phenomenon as was assumed in earlier research and theoretical development.

#### *Psychological Reactance: Race and Gender*

As a characterological variable, psychological reactance may or may not be distributed evenly across demographic lines such as race and gender. A number of studies have addressed the question of psychological reactance in terms of age and gender differences. Hong, Giannakopoulous, Lang, and Williams (1990) found a significant effect for age but not for

gender in their study; these authors surveyed 1749 adults between the ages of 18-40. The main effect for age indicated that younger participants demonstrated higher levels of psychological reactance, but no main effect for gender was obtained. This is in contrast to the findings of Joubert (1990), who found that males produced significantly higher psychological reactance scores than females. Hong, et al. (1990) explain the findings from Joubert (1990) as stemming from a small sample size and the possibility of cultural differences. The Hong study was conducted in a large city in Australia and Joubert's study was conducted in a small college town in Alabama. The position that Hong assumed in this study was that psychological reactance is a motivational trait that exists uniformly across gender but not across age.

Seemann, Buboltz, and Flye (under review) further examined differences in self-reported levels of psychological reactance with respect to race (ethnicity) and gender. Data were obtained from 2497 undergraduates attending three medium-sized universities in the United States. One of the universities was located in the Southeast, one in the Midwest and the third was in the Northwest part of the country. These authors found a significant difference between African-Americans and Caucasians in terms of self-reported psychological reactance and a significant difference between males and females was also realized. Post-hoc analysis indicated that African-Americans demonstrated higher levels of psychological reactance than did Caucasians and that males demonstrated higher levels of psychological reactance than females. No significant interaction between race and gender was found. Power estimates for the study were quite high (.99 for race [ethnicity] and .97 for gender) but the estimate of effect size was mild (eta squared of .1 for race and .07 for gender). These results both support and contradict the previous findings by Hong, et al. (1990) and Joubert (1990).

Hong, et al. (1990) suggested that the lack of obtained gender differences in their study was the direct result of the effect of social change on learned sex roles and the perceptions carried by those in specific sex roles. As the social roles of men and women become increasingly similar and less distinct, the perceived entitlement and actual access to free behaviors would be more normally distributed. These authors explain the differences found by Joubert (1990) as the result of a small and geographically isolated sample size. Dowd and Wallbrown (1993) found a significant difference between males and females in terms of psychological reactance, similar to the findings of Joubert (1990). Dowd and Wallbrown (1993) made a supported argument that the obtained differences in psychological reactance between males and females were also likely due to social conditioning, but psychological reactance itself is most likely characterological. Males and females may have the same potential for psychological reactance assuming the normal distribution of personality variables, but the male social role allows for greater expression of psychological reactance. If this is true, the difference between males and females in terms of psychological reactance may be statistically significant but would also likely be small in actual magnitude.

It should be noted that Hong and colleagues conducted their (1990) study in a large city in Australia. Joubert's (1990) study was conducted in a small town in Alabama; Seemann, et al. (under review) collected data for their study from three graduate-level institutions in geographically different areas of the United States. No estimates of effect size were computed in Hong, et al.'s (1990) or in Joubert's (1990) studies, nor was race (ethnicity) a factor in these investigations. Seemann and colleagues found that while a significant difference did exist between African-Americans and Caucasians and between males and females, the effects size of this difference was relatively mild.

Seemann, et al. (under review) found the reactance phenomenon to be largely characterological via the previous research and suggest that the observed differences in reactance with respect to race and gender are present due to social roles and cultural conditioning. These authors noted that, following the assumption that psychological reactance is a characterological phenomenon, individual differences in terms of race (ethnicity) are essentially nonexistent; the differences noted were statistically significant but clinically mild. The authors inferred that the differences obtained were due to cultural conditioning and the context in which the individual would normally live and work. Essentially, African-Americans and Caucasians demonstrated no significant difference in levels of psychological reactance in clinical terms, but African-Americans with higher levels of reactance likely needed to use or develop those tendencies because of the potential for discrimination within the majority context. Strong implications for the process and outcome of cross-cultural counseling were outlined.

#### *A Theoretical Framework*

The amount of research currently available concerning psychological reactance is admittedly limited, but it does appear to lend strong support for the characterological nature of reactance. Despite this support, psychological reactance remains a somewhat obscure and ill-defined construct. Dowd and Wallbrown (1993) argued that it is necessary to establish construct validity through the development of a nomological network to demonstrate how the construct in question relates to other established constructs. The operational, concise, and parsimonious definition of the characterological aspects of reactance would be quite useful given the potential importance of the reactance construct in the counseling relationship, within interpersonal relationships, in occupational settings, and even in medical practice. It is tempting to view reactance as a universal character trait that exists in some degree across all people, but given the

literature cited above, it is not likely that reactance is such a homogeneous construct. Huck (1998) provided additional support for the characterological nature of psychological reactance and enriched the current body of work by grounding psychological reactance in terms of a modern theory of personality.

Huck (1998) postulated that psychological reactance could find theoretical backing in Millon's (1969, 1981, 1984, 1994, 1995) theory of normal personality and psychopathology. Unlike the previously described trait-factor research (CPI, PRF, and NEO), Huck's (1998) study matched specific predictions against the core elements of Millon's theoretical framework. Huck argued that the active personality patterns would differentially predict higher reactance and the passive patterns would differentially predict lower levels of reactance, with the exception of expected paradoxical findings concerning the active-ambivalent and passive-aggressive patterns. The active-ambivalent was expected to produce lower reactance scores and the passive-aggressive was expected to produce higher scores due to the personality profiles each exhibited. Huck predicted that the Paranoid personality pattern and the Borderline pattern (severe personality patterns) would predict higher reactance than the Schizotypal pattern, which would predict lower levels of reactance. Finally, Huck (1998) predicted that Independent and Discordant personality patterns would predict high reactance and the Detached and Dependent patterns would predict lower levels of reactance. Huck operationalized Millon's theory by using the Millon Multiaxial Clinical Inventory-III (MCMI-III, Millon, 1994) in his study, an instrument developed by Millon to objectively measure theoretically-conceived personality patterns.

Huck's (1998) findings generally supported his predictions, but some anomalies were found. Huck found that the Sadistic (Active) and the Dependent (Passive) patterns did predict

psychological reactance as hypothesized, but that two active patterns (Histrionic and Avoidant) predicted low reactance. While the schizoid and self-defeating patterns demonstrated trends towards low reactance (as predicted), one passive pattern demonstrated a trend towards predicting higher levels of psychological reactance. Greater support for the grounding of psychological reactance in Millon's theory was found in Huck's later hypotheses. The Independent and Discordant personality patterns predicted high reactance as expected and the Detached and Dependent patterns predicted lower levels of reactance, with one exception. The self-defeating pattern demonstrated a trend towards lower levels of reactance but was hypothesized to predict higher levels of reactance.

Huck's (1998) study provided strong evidence for the theoretical grounding of psychological reactance in Millon's theory of personality, and the results of this study, combined with those of Seemann, et al. (under review), adds a direction for future research. Huck's (1998) investigation produced anomalies concerning the active-passive poles within the Millon theory but generally found an excellent fit between hypothesized findings and empirical data concerning the independent, discordant, detached, and dependent personality patterns. Seemann, et al. (under review) also noted anomalous findings in the NEO profile of the highly reactant individual. The anomalies detected in Huck's work indicate that psychological reactance is likely a complex behavioral phenomenon; his study approached the elements of Millon's theory as independent factors. Millon's theory of personality is a typology (Millon, 1994) and therefore the most useful information is derived from examining combinations, or types, of personality elements. Seemann, et al.'s (under review) work with the NEO was a trait-factor approach, but the anomalies detected within their study indicated that highly reactant individuals may be prone to display mutually exclusive behavioral tendencies. Examples of such anomalies include the



likelihood that a reactant individual would be aggressive but nonconfrontational, rigid and conservative in thinking but creative and interested in new experiences, and the tendency to be both extraverted and asocial.

### *Personality Style and Psychological Reactance*

Huck's theoretical grounding used combinations of the elements of Millon's theory by assessing personality with the MCMI-III, but his specific predictions were made using these elements in isolation from the others. For example, he predicted active patterns as having higher reactance and detached and dependent patterns as having lower reactance. This means that Millon's Active-Dependent type (Histrionic, scale 2a on the MCMI-III) should predict both higher and lower levels of psychological reactance; clearly, this is not possible. The combination of the active pattern and the dependent pattern, however, actually predicted lower levels of psychological reactance.

While Huck (1998) clearly established a theoretical grounding for psychological reactance within the framework of Millon's theory, there remain many unanswered questions with regard to the characterological nature of psychological reactance. Prior research into the relationship between psychological reactance and normal personality variables has expanded the nomological net to give the reactance construct theoretical grounding, sound relationships with other measures of personality, and construct validity via expected behaviors and patterns of interaction. This research has suggested that psychological reactance may be related to not one set of personality variables, but possibly more than one set; psychological reactance may best be explained in terms of personality style rather than discrete sets of personality factors.

The Myers-Briggs Type Indicator (MBTI, Myers & McCaulley, 1998) is a measure of personality types, or styles, as described by Carl Jung (Myers & McCaulley, 1998). Buboltz,

Thomas, Williams, Seemann, Soper, and Woller (in press) conducted a study that investigated the relationships between MBTI types and psychological reactance. This study was conducted to determine if personality style, as opposed to orthogonal personality traits, would produce specific predictive relationships with a measure of psychological reactance. The main finding of this study was that levels of psychological reactance were not bound to any single dimension of the four-letter MBTI types, but rather psychological reactance was related to a three-way interaction between the extraversion/introversion, sensing/intuiting, and thinking/feeling dimensions. These authors found that higher psychological reactance scores were clearly associated with a thinking (as opposed to feeling) preference, but this was mediated by the sensing/intuiting and introversion/extraversion dimensions. Introverted intuiting thinkers (INT types) produced higher levels of self-reported psychological reactance than did extraverted intuiting thinkers (ENT types). Feeling types (sensing and intuiting) produced lower levels of psychological reactance regardless of external orientation (introversion/extraversion) than did thinking types. This research emphasizes the importance of examining personality style in relating psychological reactance to normal personality; people who are primarily feeling types will demonstrate lower levels of psychological reactance, but thinking types will not always demonstrate higher levels of reactance, as the introversion/extraversion and sensing/intuiting dimensions will mediate the relationship between psychological reactance and the thinking/feeling dimension.

This study's importance extends beyond the expansion of the nomological net for psychological reactance. The results imply that examining one element of personality can be informative (feeling types) but that its opposite pole (thinking) would have to be qualified by the other elements in the MBTI type before any useful information concerning psychological

reactance is conveyed. It should be noted that the specific elements of the MBTI type provide only the most basic information in isolation; the most powerful descriptions of personality occur when two or more of these elements are taken together. The implications of these findings is that strict trait/factor research, while informative, may be limited in its global potential utility and applicability if the sample size is insufficient to detect meaningful interactions between trait/factor elements within the data.

Choca and Van Denberg (1998) supported his conceptualization by describing personality as a phenomenon that is best described from a systemic perspective or from an interactional view. These authors' descriptions of an efficient approach to the description of personality are consonant with those of the MBTI. Choca and Van Denberg (1998) described the Millon Clinical Multiaxial Inventory-III (MCMI-III) as an assessment tool that primarily addresses personality style. While it is a clinical instrument, these authors asserted that the MCMI-III examines personality patterns found in all people that are clinical only in the extreme. For example, a person may normally be very orderly and somewhat introverted socially; only in the extreme would these traits be considered indicative of obsessive-compulsive and schizoid or avoidant personality disorders. Choca and Van Denberg (1998) provided further discussion concerning Millon's (1981) theory; these authors note that Millon's theory of personality attempted to distinguish between pathological and normal personality patterns as well as classify pathological personality phenomena. Millon's theory assumes that several elements converge to determine a personality style that, in its extreme, is pathological (Millon, 1981; 1994). This conception of personality yields not a set of orthogonal traits but rather a convergence of dimensions that, when taken as a gestalt, defines an individual's personality style. In this sense the end goal is not

unlike that of the MBTI, including the speculation that specific traits in the extreme may have clinical significance.

*Millon's Theory of Personality and Personality Style*

Theodore Millon's theory of personality first appeared in 1969 in his book *Modern Psychopathology*. Millon's theory of personality is largely based on Social Learning Theory (Bandura & Walters, 1959) and evolutionary biology (Millon & Millon, 1997), with noted influences from other theoretical perspectives. The result is a theory that approaches the question of personality (normal and clinical) from the position of sociobiology, or the combination of human social functioning and evolutionary biology (Millon & Millon, 1997). Millon's theory notes that living organisms will generally adapt to the environment in the most efficient method possible; a living organism, while generally adaptive, is also time-limited and under the constraints of its own biological needs. Millon refers to four periods of sociobiological (evolutionary) development that apply to all organisms; these are existence, adaptation, replication, and abstraction. Millon and Millon (1997) described existence as a "serendipitous event" (p.28) that causes the species, and the individual organism, to come into being. Adaptation is the homeostatic process by which an organism learns to survive in its surround. Replication is the process by which the organism manages to reproduce and retain the most advantageous characteristics for coping with the environment or, if lacking an adaptive mechanism, develop such characteristics. Abstraction is the development of higher-order behavioral functions that allow for anticipation of events, reasoned decision-making, and long-term planning. This emphasis on the environment does not discount the role of the organism itself, however.

Millon's theory takes a middle ground approach to the nature-nurture debate, with greater weight on the impact of learning in personality development than on the genetic or biological factors present in an individual. This being said, the organism is still of great importance in Millon's theory as certain adaptations are assumed to be characteristic of the species and not specifically learned. Unlike the trait-factor theorists, Millon (1969) proposed a system of personality based on prototypes (styles) instead of individual personality traits. The eight basic prototypes (styles) were largely borrowed from existing descriptions and conceptualizations of personality disorders. Millon (1969) suggested that the way normal individuals function and the pathology that typifies personality disorders are fundamentally similar.

Millon (1990, 1995) proposed three polarities that he viewed as being core elements of human nature; these polarities also form the basis of the eight personality prototypes. These dimensions that serve as the framework of personality and its development. These dimensions are Active-Passive, Pleasure-Pain, and Self-Other. Millon and Millon (1997) further defined these dimensions in terms of the four stages of sociobiological development mentioned above. Pleasure-pain is seen as an existence-level phenomenon; it is simply the native drive to avoid pain and maximize pleasure. Active-passive is a function of the adaptation phase and occurs once the organism's structure is intact and in place. The organism will either attempt to modify its environment (active role) or will simply fit into its own ecological niche (passive role). As noted earlier, Millon's theory recognizes the time-limited nature of organisms; adaptation is therefore limited to the lifespan of the organism. To circumvent this limitation, organisms are self-propagating. The self-other dimension characterizes this stage; self indicates, in psychological terms, a tendency to be self-involved and to likely be somewhat neglectful of others. The other dimension indicates a tendency to nurture and be nurtured by others, or more

of a responsible social awareness. In the final stage, accommodation, all of these elements form the foundations of personality style, or how the person relates to others in order to maximize reinforcement and minimize punishment and the degree to which the individual is proactive or reactive within the environmental context. A more in-dept description of these three dimensions of personality follows.

The Active-Passive dimensions is bidirectional and characterizes the individual's approach to the environment. Active individuals take the initiative to extract reinforcers from the environment and to manipulate or change their surroundings. Active individuals do not wait for something to happen and are likely to behave in a more goal-oriented manner. Active individuals are generally vigilant and alert to the possibilities of the environment, with a certain readiness to take advantage of those possibilities. Passive individuals are generally characterized by a tendency to react to environmental conditions and to avoid taking the initiative. Passive individuals are not necessarily weak or fearful; they prefer to adapt to the way things are rather than to attempt to change them. Passive individuals are likely more introverted in their behavioral presentation and less likely to achieve their goals via any action more active than adaptation.

The Pleasure-Pain dimension, based on Freud's Pleasure Principle (Freud, 1915, in Hjelle & Zeigler, 1996), is not bidirectional in the sense that some individuals prefer one over the other. This dimension is characterized by the tendency of an individual to maximize reinforcement and avoid punishment from the environment. This dimension is more of a motivational force and it infers that Millon's theory is one that espouses a homeostatic (drive reduction) motivational construct. Millon and Millon (1974) indicated that this motivational force is present in all people but is expressed differently depending on an individual's preferences with respect to the other

dimensions. Hjelle and Zeigler (1996) noted that personality theories that espouse homeostatic motivational constructs also tend to view other personality constructs as difficult to change.

Self-Other, the third dimension, describes the individual's orientation to interpersonal and social contacts with others. A person oriented to Self could be seen as less trusting of others or less in need of social or interpersonal relationships. A person oriented to Other is more social and likely to seek out the company and companionship of others. A person oriented to Self is more independent of the social context in terms of problem-solving and meeting personal needs than the individual oriented to Other, who relies more on the social context. The Self-Other dimension, combined with the Pleasure-Pain orientation, form the basis of four personality patterns that characterize Millon's typology.

As noted previously, Millon's theory is one strongly grounded in Social Learning Theory. The four basic personality patterns formed from the Self-Other and Pleasure-Pain aspects of his theory were intended to demonstrate how an individual, based on Self-Other orientation, would tend to maximize reinforcement and minimize punishment from the environment. Essentially, Millon's theory first seeks to identify whether or not the individual forms sound, lasting relationships with others. It should be noted that these patterns are not necessarily personality types and/or styles in and of themselves, but are rather interpersonal patterns of behavior. These four interpersonal orientations can be seen as categories in which sets of more specific personality types will fit. Each of these patterns has an active and a passive aspect; in other words, the final element of Millon's theory is added to the formulation of personality patterns to identify specific personality styles. The four basic interpersonal patterns are the Dependent, the Independent, the Ambivalent, and the Detached; these styles are described below.

The Dependent pattern is one characterized by an orientation to others (as opposed to self). Individuals with this basic interpersonal pattern seek to meet their needs and avoid punishment via the social context and via their relationships with others. Dependent pattern individuals rely on others to provide security. Dependent individuals may feel inadequate, fearful of being alone, and may need to be submissive to someone or to constantly receive attention.

The Independent pattern is characterized by autonomy and self-reliance. This person does not necessarily spurn the company of others, but is likely seen more as a loner and feels compelled to meet his or her own needs. Independent types may feel more capable and gifted than others and assume that they have the right to tell others what to do. The independent type may also feel that the world is a competitive place and only the strong (and sometimes ruthless) will be successful. The needs and considerations of others are at best a secondary concern to people with an independent style.

The Ambivalent individual is one caught in between the Self and Other dichotomy. Ambivalent individuals seem unsure of whether or not to turn to others or to rely on themselves to maximize pleasure and avoid pain. Caught between the competing forces of dependency and independence, ambivalent individuals may seek stability in the external world by forcing order within a specific sphere of control. The world may also be seen in terms of a rigid hierarchal structure; in this way some ambivalent individuals can submit to those in power above them while exercising control over those in lower positions. The ambivalent type may also see himself or herself as needing support from others but lacking the trust in others necessary to recruit that support.



The Detached individual is characterized less by the Self-Other dimension and more by an inability to experience pleasure or pain. This person is likely to withdraw into self-imposed isolation, physically and emotionally away from others. Detached individuals may seek social isolation and appear to take very little pleasure from life. Conversely, they also appear to be minimally disturbed by the disruptions and discomforts that others would see as punishing. Those who are more passively detached may simply wait and see what comes, enduring the trials of the environment with stoic resilience. Each of these interpersonal patterns was theorized to express itself in either an active or passive manner, leading to Millon's original eight personality styles. These styles, listed here by their most modern labels, are the schizoid, avoidant, dependent, histrionic, narcissistic, antisocial, compulsive, and the passive-aggressive. These styles will be described in detail later in this chapter.

Millon (1969) also identified three personality patterns that he conceived as being particularly maladaptive if clinical in significance and at least somewhat unpleasant in more moderate expressions. These patterns were originally seen as distinct patterns but, after the 1981 revision to his theory, Millon posited these disorders as modifications or extreme versions of certain normal personality patterns. These patterns, termed severe personality patterns, were conceptualized in his 1969 theory and maintained in the 1981 revision. According to Millon (1981), the severe patterns are the Cycloid, the Paranoid, and the Schizotypal. The Cycloid pattern is the same as the DSM-IV-TR's Borderline personality; the other two relate directly to the DSM-IV-TR personality disorder of the same name. The severe personality patterns are not described in the same terms as the other personality styles in Millon's typology; each pattern is described in terms of the behaviors expected from someone exhibiting such a personality pattern. The severe personality patterns are described in detail later in this section.

It should be noted that while these patterns are considered severe forms of pathology in their extreme forms (especially if they are clinical in significance), more moderate exhibitions of traits and behaviors associated with these patterns are still considered aspects of normal personality. Someone who possesses cycloid (borderline) or paranoid traits may not necessarily be very pleasant, or may not have the most adaptive methods of orienting to others and to the environment, but also may not display behaviors that are of clinical significance. Choca and Van Denberg (1997) noted that there may be no rational explanation for a maladaptive normal personality style other than that a particular style is the result of the evolutionary (nature/nurture) process. Millon (1981) suggested that the severe personality patterns form because the normal mechanisms employed by the individual to obtain reinforcement and avoid punishment repeatedly fail, leading to a degeneration of otherwise healthy personality patterns.

Millon's theory has undergone several revisions since the first major reformulation in 1981. Millon (1984) included the discordant pattern as a major revision to the sociobiological model. This pattern was not seen as a bidirectional dimension and was presented to modify the way an individual approaches the pleasure-pain dimension. Millon (1984) and Strack (1999) noted that some individuals maximize pleasure and minimize pain by attacking others or by behaving in an interpersonally aggressive (active) or passive-aggressive (passive) manner. This pattern was seen as generally maladaptive in that individuals with this pattern are generally disruptive towards others and towards the self. Millon (1984) proposed two new personality styles based on the discordant pattern, namely the active-discordant (Aggressive [Sadistic]) and the passive-discordant pattern (Masochistic [Self-Defeating]). These patterns will be detailed with the other personality patterns later in this chapter.

Millon (1995, 1999) added the depressive personality pattern to his typology to reflect findings in research and theory concerning individuals who appear despondent and gloomy, even in the lack of a depressive or other Axis I mood disorder. The depressive personality was seen by Millon (1999) as a variant of the passive-detached (schizoid) pattern. The depressive personality does not replace the schizoid, but is rather seen as an alternate form based on exhibited behaviors. Millon (1999) contrasted the depressive personality with the schizoid by recognizing that, while both try to minimize pain by withdrawing, the depressive had essentially given up and the tendency to adapt to changes that come with a passive approach have essentially failed. The schizoid simply avoids others and goes about his or her business; the depressive lacks even that fundamental motivation. Millon (1999) also noted that the depressive shares some overlapping characteristics with the avoidant (active-detached) personality, but the avoidant actively attempts to manage social interaction to decrease pain; the depressive does not and appears to accept whatever comes.

#### *Millon's Typology of Personality*

In its current form, Millon's typology incorporates eleven personality patterns (or styles) and three severe personality patterns that are each gauged on a continuum. The more a particular pattern is endorsed by an individual, the more that person's behavior is impacted by the theoretical processes governing that particular pattern. Unlike other models of personality, a person can have elements of several patterns interwoven into his or her own personality style. For example, a person can exhibit characteristics that may be considered a combination of avoidant, compulsive, and self-defeating personality styles. While a person may have a primary personality style, elements of other patterns may or may not be present.

One of the major advantages of Millon's typology is that it generated a theoretically-driven assessment instrument to measure directly the constructs proposed in his theory. This instrument, the Millon Clinical Multiaxial Inventory (MCMI), is currently in its third revision and is considered to be one of the most sound and most popular measures of personality disorders currently available (Strack, 1999). The MCMI directly measures the personality constructs in Millon's theory and also provides measures of severe Axis I pathology, such as thought disorders, anxiety disorders, and mood disorders. Choca and Van Denberg (1997) and Strack (1999) described the MCMI as an instrument that measures normal and abnormal personality; the constructs within Millon's typology are measured on a continuum via the MCMI. Extreme elevations of personality scales can be indicative of a personality disorder, but these authors caution against diagnosing from a test administration alone. As such, the MCMI is essentially a theoretically-grounded measure of personality style. The MCMI will be discussed in depth in Chapter 2.

Huck (1998) noted that the development of the MCMI was a very important step for Millon's theory of personality. The MCMI has operationalized the behaviors and characteristics specific to each personality disorder and has also built in the expected degree of overlap between personality patterns. This instrument has allowed researchers to update and refine Millon's theory while empirically grounding the instrument in specific operational terms guided by the DSM-III-R and the DSM-IV's description of personality disorders. The result is an assessment tool that measures normal and clinical personality patterns based on both theoretical type and observed behaviors that form the specific personality syndromes. This is important for this current study; it is very likely that psychological reactance, as noted above, is related to specific enduring patterns of behavior, or personality styles. The MCMI and Millon's theory appear to be

uniquely qualified for use in such an investigation. Strack (1999) noted that the MCMI is a sound measure of general personality and that several of the personality pattern scales (for example, histrionic and compulsive) tend to be empirically related to healthy personality expression in all but the most dramatic of elevations on the MCMI. The personality styles present in Millon's typology follow; they are listed in the order in which they appear on the most recent version of the MCMI (MCMI-III). The MCMI-III labels are used for these personality styles.

### *Millon's Personality Styles*

1. The Schizoid Personality (Passive-Detached) is characterized by social and emotional detachment. Individuals with a schizoid personality style may be seen as severely introverted and lacking in emotional expression. Such individuals tend to live within the margins of society and avoid all but the most basic of social contacts. Schizoid individuals appear to lack all but the most basic enjoyment of life and also seem oblivious to most of life's discomforts.

Characteristically passive and detached, motivating a schizoid individual is very difficult as such a person appears to enjoy or loath very little. Schizoid individuals appear to lack drive and direction, but also do not appear to be very distressed about the circumstances of their lives.

2. The Avoidant Personality (Active-Detached) is characterized by expectations of negative appraisal from others in a social setting. Avoidant individuals experience anxiety and fear concerning interactions with others in a social context. Such individuals are wary of rejection and may demonstrate social detachment as a form of proactive self-defense. Avoidant individuals, while detached in Millon's characterization, still have a degree of need for social involvement. This need conflicts with the fear of rejection and negative appraisal characteristic to the Avoidant type, leading to significant anxiety reactions when expecting social contact or

being actually involved in such interaction. Avoidant individuals typically harbor feelings of worthlessness and self-blame and suffer from bouts of anxiety, anhedonia, and depressed mood.

3. The Depressive Personality (also Passive-Detached) is a relatively new addition to Millon's typology. Individuals characterized as Depressive tend to suffer from feelings of sadness, impending doom, and negative mood states that do not qualify as an Axis I syndrome. These individuals are overly concerned with negative events and may present as quiet, gloomy, pessimistic, and passive. Depressive individuals are likely to be overly self-critical and hesitant to act due to an unreasonable level of self-criticism. Passive and Detached, these individuals, like the schizoid, take very little pleasure from their lives but, unlike the schizoid, they demonstrate negative emotions almost constantly. Millon (1999) notes that depressive individuals likely fall somewhere in between Avoidant and Schizoid personalities, but the notable feature of the depressive is a sense of surrender to the inevitable.

4. The Dependent Personality (Passive-Dependent) is characterized by a tendency to lean on others for support, guidance, and emotional stability. Dependent individuals are conforming, insecure and likely have low self-esteem. A dependent person lacks autonomy, independence, and self-confidence; such a person is likely to attach themselves to another who is perceived as strong and capable of providing security and stability. Passive and dependent, these individuals are happiest when someone else is taking care of them.

5. The Histrionic Personality (Active-Dependent) has a high need of approval from other and is characterized by emotionally and sexually demonstrative behavior. Gregarious and outgoing, a histrionic individual has a constant need for attention, if not approval, from others. Histrionic individuals tend to be emotionally intense, extraverted, and quick to display their feelings openly. Such individuals are also likely to be always in a relationship, but such

relationships tend to be shallow and without real substance. Histrionic individuals tend to be self-centered, and interpersonal contacts can become strained due to intense emotional outbursts and the histrionic individual's lack of concern for others.

6. The Narcissistic Personality (Passive-Independent) is characterized by feelings of superiority, confidence in social situations, egocentricity, and an unreasonable expectation that others should recognize them as innately superior despite a lack of any evidence of such status. Self-absorbed and self-centered in the extreme, narcissistic individuals feel entitled to special status and favors simply based on who they are. They are boastful, brash, arrogant, and conceited.

7. The Antisocial Personality (Active-Independent) is very concerned with avoiding the control and regulations of others and with maintaining personal independence. Antisocial individuals likely feel that the best method by which to achieve one's goals is to simply take what is desired; rules and regulations are for other people. Antisocial individuals are sensitive to insult, egocentric, domineering and controlling, aggressive, competitive, and vengeful. Such individuals are sensitive to interpersonal slights, rarely forget an insult, and carry a grudge for extended period of time. Active and independent, the antisocial can be very dangerous to others who are perceived as being in the way of what he or she wants. Antisocial individuals tend to display a casual disregard for the rights, feelings or welfare of others.

8. The Aggressive (Sadistic) Personality (Active-Discordant) is characterized as aggressive, irritable, angry, and assaultive. Such individuals tend to be abusive and enjoy the suffering of others. Unlike the antisocial, who is aggressive when someone is in the way of their goals, the Aggressive (Sadistic) personality sees the aggression and the inflicting of misery as the goal. Characteristically active and discordant, the aggressive personality enjoys disrupting

social relationships and causing some sort of hurt or discomfort to others. Individuals with such an aggressive style may be able to redirect these tendencies to socially approved endeavors or simply display an aggressive personality. Others are interpersonally abusive and cruel. Legal and marital problems are common with this style.

9. The Compulsive Personality (Passive-Ambivalent) is characterized by rigid and meticulous patterns of behavior. These individuals likely have problems identifying where they fit in society (Millon, 1999; Millon and Millon, 1997) and approach the social world with uncertainty. To quell these feelings, the compulsive structures his or her environment and displays considerable anxiety when things are out of place or in disorder. The compulsive personality is characterized as orderly, conventional, structure-oriented, and conforming. This personality style is also often perfectionistic and efficient. Compulsive types may feel anger and resentment towards those who routinely violate rules or those with an unconventional style, but the compulsive is able to suppress these feelings if the target is an authority figure whose approval is important to the compulsive individual.

10. The Passive-Aggressive (Negativistic) Personality (Active-Ambivalent) is characterized by bouts of negative mood and outbursts. The passive-aggressive personality is seen as moody, verbally aggressive, pessimistic, and brooding. These individuals are known to sulk over real or imagined slights or problems and catastrophize the outcome of problems. Individuals with this personality strike others as quarrelsome, disgruntled, and moody. Significant problems with family members and coworkers are common. An ambivalent personality style, the passive-aggressive seems to be unable to balance the self-other dichotomy in order to meet personal and emotional needs. In the extreme, this personality is characterized



by congenial compliance one moment and negativistic (and sometimes blatant) oppositional behavior the next.

11. The Self-Defeating Personality (Passive-Discordant) is characterized by submissive and self-effacing behavior, even if such is out of context. Individuals with this personality style often believe that they deserve to suffer and must endure their fate. They are conforming and place themselves in an inferior position in relationships. Unlike the dependent, individuals with this personality pattern do not expect others to meet their needs. They display a despondent attitude and may also appear to be moderately depressed.

12. The Schizotypal Personality is a severe personality pattern characterized by social detachment, disruption of mood and affect, and bizarre ideation. A schizotypal individual may exhibit the flat affect and unresponsive demeanor of a patient diagnosed with schizophrenia, or they may exhibit an anxious vigilance and always seem ill at ease. Schizotypal individuals are uncomfortable in social situations and live on the fringes of society in most cases. Magical thinking, tangential reasoning, loose associations, and bizarre thoughts and delusional ideas are also characteristic. Individuals with a schizotypal personality are thought to be at risk for developing a thought disorder (Millon, 1999; Strack, 1999).

13. The Borderline Personality is a severe personality pattern characterized by intense, unstable emotions, labile mood swings, brief, intense, and tumultuous interpersonal relationships, a demonstrated pattern of impulsive behavior, a fear of abandonment, and dependency-seeking behavior. A disrupted sense of identity is also common. Individuals with a borderline personality are prone to separation anxiety and often experience episodes of intense, aggressive emotions and intense but brief periods of depression. These individuals are also prone to suicidal gestures and brief periods of psychotic behavior. Borderline individuals seek comfort

and stability but then fear that they will lose their identity within the context of the relationship. When the fear of losing the self is manifest, the borderline acts out with an intense emotional assault or with a deep depression with irritable features and likely suicidal gestures. Once the borderline individual has separated from the other person, the fear of abandonment sets in, and the borderline individual will begin anew to seek emotional support and a dependent role. This *I hate you, don't leave me* behavior can be very confusing and emotionally challenging to the borderline person's significant others.

14. The Paranoid Personality is a severe personality pattern characterized by wary vigilance, lack of trust, and some sort of delusional belief system or sense of grandiosity. Paranoid individuals perceive others as trying to control or harm them in some way; they are prone to take remarks out of context and exaggerate the significance of otherwise minor events. A paranoid person come across as abrasive, brash, irritable, and anxious. They can be hostile if they perceive some form of provocation. Paranoid individuals are generally rigid and argumentative; they are unable or unwilling to see the other side in a disagreement due to their suspicious and untrusting nature. Personal relationships are usually disrupted and strained. Paranoid individuals will persist with delusions of grandeur, ideas of reference, and delusions of persecution in the face of clear evidence to the contrary.

This study focuses on generalizing past reactance research to a clinical sample of inmates, testing a modified version of a theoretical model of psychological reactance in terms of personality style, and on predicting levels of reactance based on specific behavioral clusters found in specific personality styles.

## Hypotheses

*Statement of Hypothesis 1.* The mean level of psychological reactance obtained from an inmate sample is expected to be significantly higher than the mean level of psychological reactance found in a combined college student sample; the inmate sample is also expected to demonstrate less variability in psychological reactance scores.

*Justification for Hypothesis 1.* As noted above, the bulk of the research concerning psychological reactance has been conducted with college student populations. Prochaska and Norcross (1999) noted that a common criticism of applied research in psychology is that there is often an unreasonable expectation of generality of results from college student populations to other groups. Several of the studies cited thus far have presented potentially important results, but none of them have examined the difference between a college population and a clinical population in terms of psychological reactance. Such a difference could possibly be assumed with good reason, but such an assumption is stronger when backed with an empirical test. The results of Hypothesis 1 should provide a degree of grounding for psychological reactance in terms of the nature of the sample and an index of the differences (if any) between a college student and a clinical sample. This latter aspect is of potentially great importance. If a difference does exist it would give the interpretation of psychological reactance scores a relative weight. A high score for a college student population could also be seen as a moderate score for an inmate population.

*Statement of Hypothesis 2.* African-American inmates are expected to produce greater mean psychological reactance scores than Caucasian inmates. The effect size of this difference is expected to be low ( $< .01$ ), indicating that the mean difference between African-Americans and Caucasians in terms of psychological reactance scores is not clinically significant.

*Justification for Hypothesis 2.* As noted above, multiculturalism is a trend of increasing importance in psychology and it is expected to endure. Psychological reactance is poorly defined in terms of demographic specificity. One study to date has examined the potential differences between African-Americans and Caucasians in terms of psychological reactance; this study was conducted with a large, geographically diverse, sample of college students. Seemann, et al. (under review) found that African-Americans were significantly higher in psychological reactance than were Caucasians, but the obtained effect size for the difference was notably mild. Seemann and colleagues argue that this difference, minor though it is, exists because of the existence of discrimination against African-Americans and differentially fewer opportunities afforded African-Americans within the Caucasian majority context. These authors support the characterological nature of psychological reactance and theorize that, if the cultural climate were more egalitarian, no significant difference would be obtained. Essentially, this mild difference in levels of psychological reactance has occurred because many African-Americans have found it necessary to repeatedly defend personal freedoms within the majority context.

This finding is one of some importance, but it has limited generality (even given the sample size and geographic diversity) because the population consists of college students. Research with an inmate population would greatly increase the utility of Seemann, et al's findings by demonstrating a similar relationship between Caucasians and African-Americans in terms of psychological reactance. Demonstrating the expected difference and the same specific results with an inmate sample would further reinforce the characterological nature of psychological reactance and generalize the relationship between race (ethnicity) and psychological reactance to a clinical population.

*Statement of Hypothesis 3.* The avoidant, depressive, and self-defeating personality patterns are expected to predict significantly lower levels of psychological reactance.

*Justification for Hypothesis 3.* As stated above, Huck's (1998) research provided initial theoretical grounding for psychological reactance in terms of Millon's theory of personality. As research into the characterological nature of psychological reactance progresses, the necessity of a theoretical basis for reactance theory becomes more evident. Huck's (1998) research attempted to match theoretical aspects of psychological reactance to corresponding aspects of Millon's theory of personality. While his hypotheses were largely supported, Huck's work did include predictions based on mutually-exclusive theoretical propositions. An example of this is a prediction made concerning the Histrionic (active-dependent) personality pattern; the active component should predict higher levels of reactance while the passive component should predict lower levels of reactance. Clearly, this is not possible, and no provisions were made for such a contradiction.

Millon (1999) added further definition to the personality patterns, including the severe personality patterns, by presenting empirical work that further defined a personality pattern's endorsement of specific polarities concerning the pleasure-pain, active-passive, and self-other dimensions. This expanded specificity allows for more specific predictions concerning the relationship between psychological reactance and personality style. The greater specificity allowed under Millon's (1999) theoretical expansion will serve as the basis for hypotheses 3 through 5.

According to Millon (1999), the Avoidant, the Depressive, and the Self-Defeating (Masochistic) personality are weakly associated with maximizing pleasure and are strongly associated with minimizing pain. All three have a neutral approach to self-other (average on both

poles) with the self-defeating personality slightly more oriented to other. This indifference to pleasure and strong orientation to avoiding pain, coupled with an indifference to the self-other pole, indicates that lower levels of psychological reactance would be observed. According to Huck's (1998) study, the individual simply has no investment in protecting personal freedoms but does have an investment in avoiding harm.

*Statement of Hypothesis 4.* According to a modified version of Huck's (1998) theoretical predictions, the dependent and histrionic personality styles are expected to predict significantly lower levels of psychological reactance.

*Justification for Hypothesis 4.* According to Millon (1999), the histrionic personality, like the self-defeating and dependent personality patterns, has a very weak association with self and average association with other (or strong, in the case of the dependent personality pattern). The dependent and self-defeating patterns also have strong endorsement of the passive polarity. As Brehm and Brehm (1981) noted, psychological reactance is a theory of action, or active behavior. The passive nature of the self-defeating and the dependent personalities, along with an average (self-defeating) or strong (dependent) affiliation for the other pole indicates a lack of self-investment and a tendency to avoid reactant behavior. These patterns, from a theoretical perspective, will sacrifice themselves to keep others happy with them.

It is tempting to predict a direction for the histrionic personality from a theoretical standpoint, but the opposing nature of the active-dependent personality style makes this task very difficult. The association with self is weak, the association with other is average, and the histrionic endorses an active personality style. It is likely that the histrionic personality is unrelated to psychological reactance as there is no clear evidence which of the conflicting

components (active, which predicts higher reactance, versus dependent, which predicts lower reactance), as defined by Huck (1998), would emerge as dominant, if any.

*Statement of Hypothesis 5.* The sadistic and the antisocial personalities are expected to predict significantly higher levels of psychological reactance.

*Justification for Hypothesis 5.* According to Millon (1999), the sadistic and the antisocial personalities are both strongly active and very weakly associated with the passive pole. Both are also weakly associated with self and strongly (antisocial) or at least moderately (sadistic) oriented to other. Millon (1999) noted that the antisocial is less concerned with minimizing pain and more concerned with the acquisition of pleasure. The sadistic's pain-pleasure orientation is disrupted; this personality has a strong orientation to inflict pain and an average association with denying pleasure. As Brehm and Brehm (1981) noted, freedom and control are central aspects of psychological reactance. As these personalities, from a theoretical standpoint, are specifically oriented to control and freedom, they should both predict higher levels of psychological reactance.

*Statement of Hypothesis 6.* The schizotypal personality is expected to predict significantly lower levels of psychological reactance.

*Justification for Hypothesis 6.* As noted above, the severe personality patterns are decompensated versions of the normal personality styles. While they are maladaptive and disruptive, they are not necessarily indicative of a personality disorder unless found in the extreme. While not stated, it can be assumed that an individual has (or had) another primary personality style that was supplanted by the severe personality pattern. Each of the three severe personality patterns should demonstrate a specific relationship with psychological reactance based on Millon's (1999) theorized decomposition of the normal personality dimensions.

According to Millon (1999), the Schizotypal personality is unconcerned with pleasure or pain, is neutral with regard to an active or passive approach to the environment, and also has little concern regarding self or other; essentially, the schizotypal personality is rated with weak associations on all of these polarities. Additionally, the schizotypal personality's specific polarities (pleasure-pain, active-passive, self-other) are disrupted in some way; the schizotypal individual does not attempt to manage pleasure-pain, for example, in the same manner as a healthier individual.

*Statement of Hypothesis 7.* The borderline personality is expected to predict significantly higher levels of psychological reactance.

*Justification for Hypothesis 7.* According to Millon (1999), the borderline personality demonstrated an average affiliation for all six polarities, but the relationships between all polarities are disrupted. The individual seeks both pleasure and pain, seeks freedom and dependence, and remains passive with periodic episodes of active (usually acting out) behavior. Borderline behavior is described as chaotic, at best. The borderline personality should predict higher levels of psychological reactance as the disruption between polarities has the person in a state of constant flux in terms of meeting their needs and affiliating with others.

*Statement of Hypothesis 8.* The paranoid personality is expected to predict significantly higher levels of psychological reactance.

*Justification for Hypothesis 8.* According to Millon (1999), the paranoid personality, like the schizotypal, is weakly affiliated with all polarities. These polarities are essentially split for the paranoid, however, removing the balance between self-other and active passive. Pleasure and pain, for the paranoid, essentially becomes a bidirectional dimension. Because of this disruption



and because of the dichotomous nature of the pleasure-pain orientation, the paranoid personality should predict higher levels of psychological reactance.

*Statement of Hypothesis 9.* Psychological reactance is expected to have a strong positive relationship with the compulsive, passive-aggressive, sadistic, antisocial, and narcissistic personality styles; individuals with high levels of psychological reactance (defined as one standard deviation or more above the sample mean) are expected to demonstrate significantly higher levels of one or more of these personality styles.

*Justification for Hypothesis 9.* As noted above, personality style is likely the next logical step in defining the characterological nature of psychological reactance. Prior research has identified a number of characteristics that are thought to be typical of the highly reactant individual (Buboltz, et al., 1999; Dowd, Milne, & Wise, 1991; Dowd & Wallbrown, 1993; Dowd & Sanders, 1994; Seemann, et al., under review). Personality style is generally characterized by a grouping of related behaviors and a specific orientation to the environment (Hjelle & Ziegler, 1996). As noted previously, some of the characteristics that describe the highly reactant individual are mutually exclusive, such as being conforming and independent. It is likely that more than one type of expression exists for psychological reactance, and it is also likely that this type of expression is governed in part by personality style. Millon's theory provides a rich source of personality styles, each with specific behavior attributes.

The prior research noted above has identified personality attributes found in the compulsive, passive-aggressive, sadistic, antisocial, and narcissistic personality styles that are related to highly reactant behavior. Seemann, et al., (under review) noted that psychological reactance could follow specific sets of personality traits that are exclusive of each other. In this

vein, psychological reactance could be seen as a multifaceted construct with many modes of expression and not just as a single, ubiquitous construct.

*Statement of Hypothesis 10.* Psychological reactance is expected to have a strong inverse relationship with the dependent, avoidant, and schizoid personality styles; individuals with low levels of psychological reactance (defined as one standard deviation or more below the sample mean) are expected to demonstrate higher levels of one or more of these personality styles.

*Justification for Hypothesis 10.* As noted in the rationale for hypothesis 9, personality style is likely the next logical step in defining the characterological nature of psychological reactance. As prior research has identified the characteristics associated with high levels of psychological reactance, it can be inferred that there are behaviors associated with lower levels of psychological reactance as well. If this is true, then there are likely personality styles that demonstrate lower levels of psychological reactance and that an individual need only demonstrate the characteristics of one, not all, of these personality styles. The dependent, avoidant, and schizoid personality styles each characteristically demonstrate behavior that is contrary to the empirical findings regarding psychological reactance (noted above). As such, they are each expected to be higher when the level of psychological reactance is low.

### *Summary of Chapter 1*

Psychological reactance is a variable that has attracted increasing interest in the last few decades. Prior research has demonstrated that reactance is most likely a trait variable that is activated by aspects of the situation. Research has also demonstrated that reactance has clear and distinct relationships with certain trait-factor personality constructs and has implied a general pattern of behavioral predispositions exhibited by highly reactant individuals. Some of the results from these prior studies have produced profiles of the highly reactant individual that

contain conflicting or exclusive elements. Other studies concerning reactance and personality traits have found that specific factors account for significant portions of the variance present in psychological reactance but still leave much to be explained. Explorations into the relationship between psychological reactance and personality style (as opposed to specific traits) are relatively new and have produced promising results. Examining psychological reactance with a focus on personality style may help resolve the potential conflicts present in past research concerning observed behavior and personality and may provide information on how personality elements interact with respect to the reactant response, accounting for more of the variance present in reactance scores. Psychological reactance is a construct of increasing importance as it likely plays a major role in mediating the process and outcome of therapy. Reactance also is emerging as an important construct in explaining noncompliance with physician's advice. This study focuses on generalizing past reactance research to a clinical sample of inmates, to testing a modified version of a theoretical model of psychological reactance in terms of personality style, and on predicting levels of reactance based on specific behavioral clusters found in specific personality styles.

## CHAPTER 2

### Method

The primary purpose of the present study is to confirm the hypothesized relationship between personality style and psychological reactance and to test the hypothesis that reactant behavior exists in more than one distinct form and is not a unitary construct. This study tested the specific predictions outlined in the previous chapter. Psychological reactance, as noted in the pervious chapter, has been demonstrated to be largely characterological in nature. Individuals who demonstrate higher levels of psychological reactance tend to have specific personality traits in common; these traits can be organized into logical groups. Individuals with these specific patterns of behavior, or personality styles, likely will demonstrate higher levels of psychological reactance than those who demonstrate clusters of behaviors found in the past research to be unrelated to psychological reactance.

The secondary goals of this study are to confirm, with modifications, Huck's (1998) theoretical grounding of psychological reactance in Millon's theory of personality and to expand the generality of prior research from college student populations to a sample of medium security inmates. Huck's theory was specifically tested with the modifications noted in the previous chapter. The level of psychological reactance obtained from the inmate sample was tested against the levels of reactance from an archive sample of college students.

Psychological reactance was measured using the Therapeutic Reactance Scale (TRS; Dowd, Milne, & Wise, 1991), a measure consisting of 28 items scored on a four point likert-type scale. The TRS is the most widely used measure of psychological reactance. The TRS is brief and, unlike other available measures of reactance, the TRS primarily measures exhibited behavior and not speculative mentation that may or may not lead to action (Dowd, et al., 1991;

Dowd & Wallbrown, 1993; Huck, 1998). Personality style, as described by Millon, Rodgers, and Millon (1997), will be measured using the Millon Clinical Multiaxial Inventory-III (MCMI-III, Millon, et al., 1997). The MCMI-III is an operational measure of Millon's theory of personality; the MCMI-III measures both normal personality style and disorders of personality (Craig, 1999; Strack, 1999).

### *Participants*

Participation in the current study was limited to adult males 18 years or older who were incarcerated in a medium security correctional facility at the time the data was collected. Participation was restricted to males since a female medium security inmate population was unavailable. Four hundred and eighty-four participants were recruited for the study to ensure appropriate statistical power and clinical generality of findings. Participants included individuals recruited from the Wade correctional centers. The Wade system is composed of two camps, namely David Wade Correctional Center in Homer, Louisiana, and Forcht Wade Correctional Center in Keithville, Louisiana. Participation was voluntary and participants were treated in accordance with the ethical guidelines established by the American Psychological Association (APA, 1992). No payment or incentive was offered for participation in this study and no penalty was incurred by inmates who refused to participate. All participants were guaranteed anonymity.

### *Instruments*

The three principle instruments used in the current study were the Millon Clinical Multiaxial Inventory-III (MCMI-III), the Therapeutic Reactance Scale (TRS), and a demographic data questionnaire.

*The Millon Clinical Multiaxial Inventory-III (MCMI-III)*

The MCMI-III is a 175-item true-false inventory that measures 14 personality patterns and 10 clinical syndromes. The MCMI-III is a self-report measure that is designed for use with adults 18 years of age or older (Craig, 1999; Millon, et al., 1997, 1997a; Strack, 1999). The MCMI (first version) was introduced in 1977 the MCMI-III is the most recent revision of Millon's inventory. The MCMI-III is an operational measure of Millon's theory of personality and was designed to conform to the diagnostic standards of the DSM-IV (Craig, 1999; Huck, 1998; Millon, 1997a; Strack, 1999).

The MCMI-III reflects Millon's (1997a; Strack, 1999) assumptions that certain personality patterns, in their extreme, are diagnosable entities and that certain clinical syndromes are theoretically related via symptomology and clinical presentation. The MCMI-III reflects this assumption with overlapping items, or items that load on more than one personality or clinical scale. For example, schizoid and avoidant personalities are both socially detached, therefore both of these scales have certain specific features in common, such as a specific dislike of recreational social activities. Such features are reflected in test items, and several scales have certain items in common.

The MCMI-III was initially normed on a sample of 998 psychiatric inpatients from the United States and Canada (Millon, 1997). This norming sample was split into two groups; the first group (600 participants) was used to create the personality scales and the second group (398 participants) were used to cross-validate the initial findings. Subsequent research has validated the initial norming and has supported the claims that the personality scales are valid measures of personality style when elevated above the norm but not into the clinical range (Millon, 1999; Strack, 1999). The MCMI-III is considered to be a reliable and valid test; Cronbach's alpha for

the personality scales ranges from .67 to .90, indicating that the test is internally consistent. Test-retest reliability is sound with a range of .84 to .96 over a period of 14 days.

The MCMI-III, unlike other major tests of personality and psychopathology, uses base rate scores as an alternative to standard T-scores. Millon's theory does not assume that personality disorders or severe personality patterns are normally distributed within the population (Millon, et al., 1997). Personality disorders and severe patterns are assumed to be relatively rare (Craig, 1999; Strack, 1999) and the use of base rate scores attempts to accurately match the actual incidence of such syndromes in the population at large.

Base rate scores provide more of a gradual approach to clinical significance than a T-score cutoff that is based on a standard deviation above the statistical mean. Base rates do not assume that there is a normal or normative level of schizoid behavior, for example. While all base rate levels are adjusted to have similar meaning across scales, the number of items endorsed and the weight given each of these items is different for each given scale. Someone having a bad day at the office could endorse items reflecting an aggressive personality, but because such a phenomenon is relatively common the criteria for clinical significance is higher. Fewer items must be endorsed to approach a clinically meaningful base rate with the schizotypal pattern because the behavior that characterizes this severe personality is generally extreme and maladaptive.

Millon, et al. (1997) set the base rate for clinical significance at 75; this reflected the scale elevations of psychiatric patients. For the personality scales, a base rate score of 75-84 indicates the presence of some clinically significant traits but likely not the presence of a personality disorder. Base rate scores of 85 or higher indicated the likely presence of a disorder. Elevations below 75 but above 60 indicated a prominent personality style (or the possible

presence of a developing severe personality pattern, but this has not been empirically verified) but not the presence of clinically significant phenomena.

The MCMI-III contains three measures of test validity, termed modifying indices, and one validity scale. The validity index is a simple scale consisting of three questions so outrageous in their content that they would only be endorsed as true if someone was either malingering a psychiatric condition or responding randomly to test items. All three items were consistently endorsed as false by psychiatric inpatients. Millon, et al., (1997) suggested that the endorsement of two of these items as true should render the test invalid. Endorsement of one as true should give the examiner rise to interpret the test with caution. Other authors (Choca & Van Denberg, 1998; Craigm, 1999; Strack, 1999) suggested that even one item endorsed as true should invalidate the test.

The modifying indices consist of three scales, namely disclosure, desirability, and debasement. The disclosure scale is not a traditional scale in that it has no items of its own; it is made up of a combination of the raw scores from the personality style scales. High scores indicate that an individual is over-disclosing on the test and is not editing personal information to the degree expected by a person from the normal population. Low scores indicate a degree of defensiveness and a reticence to admit to problems, faults, and negative aspects of character. Extreme scores (high or low) on this scale will invalidate the test.

The desirability index is a scale meant to tap the respondent's potential for socially desirable responding. Higher scores indicate that the respondent is attempting to answer items in a socially acceptable direction and not as they may be true for him or her. High scores indicate an attempt to appear in a favorable light and without problems. Lower scores on this scale have no particular meaning. The debasement index measures a respondent's tendency to exaggerate



problems or highlight potentially clinical symptoms. High scores can be seen as an attempt to draw attention to oneself, as a cry for help, or as a specific attempt to appear to be in more distress than is actually present. Low scores on this scale have no particular meaning.

The MCMI-III measures the 14 personality styles noted and described in Chapter 1. The 11 personality patterns and three severe personality patterns are clustered separately on the test. The eleven personality styles are the schizoid, avoidant, depressive, dependent, histrionic, narcissistic, antisocial, aggressive (sadistic), compulsive, passive-aggressive (negativistic) and self-defeating. It should be noted that while all of these personality styles exist with substantiation in Millon's theory, the depressive, aggressive (sadistic), passive-aggressive (negativistic), and self-defeating personality styles do not correspond with existing diagnostic categories within the DSM-IV. The three severe personality patterns are the schizotypal, the borderline, and the paranoid; all of these categories are represented in the DSM-IV.

The MCMI-III also measures clinical syndromes in two distinct clusters, namely the clinical syndromes scales and the severe syndromes scales. These syndromes are intended to operationalize the symptomatic criteria for their Axis I counterparts from the DSM-IV. The clinical syndrome scales from the MCMI-III are anxiety disorder, somatoform disorder, bipolar: manic disorder, dysthymic disorder, alcohol dependence, drug dependence, and post-traumatic stress disorder. The severe syndromes measured by the MCMI-III are thought disorder (psychosis), major depression, and delusional disorder. It should be noted that these scales are mentioned to provide a complete picture of the MCMI-III but these scales are not included in any portion of the current study.

*The Therapeutic Reactance Scale (TRS)*

The Therapeutic Reactance Scale (TRS; Dowd, et al., 1991) is the most popular measure of psychological reactance. The TRS is composed of 28 items scored on a four point likert-type scale. The TRS yields three scores; Behavioral Reactance (TRS:B), Verbal Reactance (TRS:V), and a Total Reactance Score (TRS:T). TRS:B and TRS:V are effectively subscales derived by Dowd, et al., (1991) via factor analysis from the TRS:T. Internal consistency, convergent and divergent validity, and construct validity have been established for the TRS:T but not for either of the two subscales. Internal consistency scores for the TRS ranged from .75 to .84 (TRS:T); test-retest reliability ranged from .57 to .60. Subsequent studies have indicated that the TRS has construct validity as theoretical predictions were generally supported (Buboltz, et al., 1999; Huck, 1998; Seibel & Dowd, 1999).

Subsequent studies have established that the TRS is an internally consistent instrument, with one sample demonstrating an internal consistency of .80 and a second sample of unrelated participants demonstrating an internal consistency of .77. Dowd, et al.'s (1991) original norming sample mean was 68.87 (SD= 7.19); this data was produced from a sample of undergraduate students at a large Northern University. Other samples have demonstrated mean TRS:T scores similar to the original norming sample mean found by Dowd, et al. (1991). Seemann, et al. (under review) found a mean TRS:T score of 76.44 (SD= 11.29) with a college student population in a mid-sized Southern university. Huck (1998) found a mean TRS:T score of 69.7 (SD=11.3) with a population similar to Dowd, et al.'s (1991) original norming sample. Buboltz, et al. (1999) found a mean of 69.3 on the TRS (SD=11.3).

The TRS is a self-report instrument that presents participants with statements about specific reactions to loss or potential loss of personal or interpersonal freedoms. Participants then

gauge how much they identify with the specific reaction presented in the statement using a four-point likert-type scale. Some statements present specifically reactance-invoking situations and are scored normally. Others present situations in which a low-reactance behavior is described; such items are then reverse-scored.

The TRS focuses primarily on self-reported behavior, or what the individual is doing or would do in a given situation. This instrument has less emphasis on value judgements, mentation, and perceived emotional expression as these constructs are considered secondary to reactant behavioral expression. Mentation is specifically addressed with little attention in the TRS as Brehm and Brem's (1981) construct of psychological reactant is one largely governed by immediate reactions to specific threats or perceived threats to personal freedoms or the ability to control access to those freedoms. As such, the TRS largely measures reactant behavior (Huck, 1998).

### *Procedure*

The study as proposed has the full consent of the Human Subjects Committee of Louisiana Tech University and the Louisiana Department of Corrections (DOC). The questionnaires were administered to the participants in groups and individually; group assessment occurred during the standard intake and diagnostic phase of inmate induction into the DOC. Group administrations were conducted at the Forcht Wade Correctional Center in Keithville, Louisiana. Individual administration occurred on a case by case basis with inmates who had already completed the induction process and were serving their sentences at David Wade Correctional Center in Homer, Louisiana. All participants in this study received a verbal description of the project, a guarantee of anonymity, and the opportunity to refuse to participate. Participation in this study was voluntary and participants had the option not to participate if they

so chose. No incentives were offered for participation and inmates who chose not to participate were not penalized. All participants were treated in accordance with the ethical guidelines established for psychologists by the American Psychological Association (APA, 1992).

### *Data Analysis*

Data analysis occurred in a series of steps that followed the hypotheses as presented. Data from the MCMI-III, the TRS (total score only, or TRS:T), and the demographic data sheet was coded into a spreadsheet statistics program and scored. A table of means and standard deviations, as well as a matrix of correlations between the MCMI-III scales and TRS:T, was prepared as a preliminary part of the data analysis procedure; these tables are presented in Chapter 3. A t-test was conducted using the obtained TRS:T scores from the participant sample and those from an archive sample of college students. As this procedure is a priori and does not involve data from the MCMI-III, the possibility of Type I error inflation was adequately controlled.

A one-way ANOVA was conducted using psychological reactance as the dependent variable and race (ethnicity) as the independent variable. Only those participants who elected to complete the race/ethnicity section of the demographic data sheet, and only those who identified themselves as African-American or Caucasian were included in the analysis. This procedure was used to detect any significant differences between African-American and Caucasian participants in terms of psychological reactance. An analysis of variance procedure (ANOVA) was chosen as it allows for the computation of an effect size and for the statement of the a priori hypothesis noted above in hypothesis 2. As this procedure does not involve the data from the MCMI-III, the hypothesis is stated a priori, and only a portion of the sample will be used, Type I error was sufficiently controlled.

A stepwise multiple regression was conducted to test the hypotheses that stem from the modifications made to Huck's (1998) theory in light of Millon's (1999) clarification of the theoretical grounding of personality disorders. Huck (1998) used multiple regression to test his theory of psychological reactance. Multiple regression has been used in several of the major studies concerning psychological reactance and personality (e.g, Buboltz, et al., 1999; Dowd, et al., 1994; Dowd & Wallbrown, 1993; Seemann, et al., under review). Statistics obtained from the multiple regression include the degree to which personality style accounts for the variance in psychological reactance ( $R^2$  and adjusted  $R^2$  statistics) and which personality styles are related to psychological reactance in a positive or negative manner by assessing the individual contribution of the Beta weight for each scale.

Lastly, a multivariate analysis of variance (MANOVA) was conducted to test the final series of hypotheses. With psychological reactance as the sole independent variable, the dependent variables (the personality scales of the MCMI-III) were assessed for significant change relative to the level of psychological reactance (high, moderate, or low). Psychological reactance was categorized by standard deviation (SD); high or low reactance was determined as one or more SD's above or below the mean, respectively, and the moderate level of reactance fell within one SD of the mean. The a priori hypotheses stated above were entered into the MANOVA as such, thus eliminating the need for post-hoc comparisons and avoiding the loss of statistical power associated with those comparisons.

*Hypothesis 1:* This hypothesis states that the level of psychological reactance present in a sample of prison inmates is higher than in a sample of college students. Psychological reactance was

measured by the TRS:T score and a two sample t-test was conducted using the obtained results from the prison sample (sample 1) and an archive sample of college students (sample 2).

*Hypothesis 2:* This hypothesis states that African-Americans in the sample of prison participants will demonstrate a significantly higher level of psychological reactance than Caucasians in the same sample as measured by the TRS:T. While this difference is expected to be statistically significant, the effect size is expected to be very small, indicating limited clinical significance. This hypothesis was tested using an ANOVA with race (ethnicity) as the independent variable and psychological reactance as measured by the TRS:T as the dependent variable. Given the results presented in Chapter 3, effect sizes were not computed.

*Hypotheses 3, 4, 5, 6, 7, and 8:* These hypotheses were tested under the same procedure and thus are described together in this section. A simultaneous multiple regression was conducted with the 14 personality styles (11 normal and three severe) from the MCMI-III as independent variables and TRS:T as the dependent variable. The specific predictions made under each hypothesis were tested by examining the beta weights produced by each scale and the direction of its contribution in accounting for a portion of the variance present in the psychological reactance scores. A correlation matrix was also constructed in order to examine the intercorrelations and specific linear relationships between the MCMI-III scales and TRS:T.

*Hypotheses 9 and 10:* These hypotheses were tested under the same procedure and thus are described together in this section. A MANOVA was conducted to test these hypotheses with TRS:T as the independent variable and the 14 personality scales of the MCMI-III as the

dependent variables. Specific a priori hypotheses (planned comparisons) were included to test the directionality of the findings so that post hoc tests need not be used. This procedure tested the global hypotheses that specific personality styles are related to higher or lower levels of psychological reactance, specifically, and that more than one personality style can have such a relationship while remaining independent of other personality patterns. This global hypothesis, expressed via hypotheses nine and ten, concerned the relationship between reactance and personality based on the assumption that psychological reactance is not only characterological in nature but is an integrated part of specific personality styles.

### *Summary of Chapter 2*

The Method section as presented described the participant population and the procedure by which the specific hypotheses stated in Chapter 1 were tested. The MCMI-III, a theoretically based and empirically validated measure of personality style, and the TRS, a measure of psychological reactance, was employed as the principle means by which the data were generated. Data analysis took place in several steps, the first of which was the cursory examination of means and standard deviations for the MCMI-III and the TRS scales. A correlation matrix was also be generated. A two sample t-test (using an archive sample of student data as the second sample) was used to test hypothesis 1, a one-way ANOVA was employed to test hypothesis 2, a simultaneous multiple regression was conducted to test hypotheses 3 through 8, and a MANOVA tested the global hypothesis that is comprised of hypotheses 9 and 10. A priori hypotheses were stated to protect against the possibility of Type I error and to avoid the necessity of power-inefficient post hoc tests. The results of these hypotheses and their descriptive tables are presented in Chapter 3.

## CHAPTER 3

### Results

This chapter provides the results of the current study. Sample characteristics are presented first, followed by means, standard deviations, and correlations between the variables of interest. Reliability estimates for the scales used in the current study will be examined. The results of the research hypotheses will be presented, and a summary of these results will conclude the chapter.

#### *Participants*

Participation in the current study was limited to adult males 18 years of age or older who were incarcerated in a medium security correctional facility; participation was restricted to males since a female medium security inmate population was unavailable. An initial sample of 484 inmates was recruited to participate in the study. A total of 438 participants were retained in the current study after nine were excluded for failure to complete the demographic data sheet, 17 were excluded for failure to complete the TRS, and 20 were excluded for either failing to complete the MCMI-III or for producing an invalid profile. Participants included in the analysis ranged in age from 18 to 70 with a mean age of 30.5 and a standard deviation of 9.63. The final sample consisted of 281 African-Americans (64.2%), 118 Caucasian-Americans (26.9%), 25 Hispanic Americans (5.7%), 12 Asian-Americans (2.7%), and 2 Native Americans (.5%).

The current sample demonstrated considerable variability in the MCMI-III scales. The means and standard deviations for these scales and the TRST are listed in Table 1. The current sample's mean of 68.87 (SD= 6.75) is the same as the mean found for



Table 1

*Means, Standard Deviations, and Reliability Estimates for the MCMI-III Scales and TRST*

Scale	Mean	SD	Alpha
TRS Total Score	68.87	6.75	.69
Schizoid	64.32	20.46	.73
Avoidant	56.13	25.86	.81
Depressive	63.10	28.57	.80
Dependent	51.03	21.70	.77
Histrionic	44.54	13.21	.71
Narcissistic	65.68	17.99	.62
Antisocial	68.91	18.75	.71
Aggressive (Sadistic)	61.01	17.73	.76
Compulsive	47.83	14.97	.65
Passive-Aggressive	65.48	25.13	.68
Negativistic (Self-Defeating)	56.03	27.27	.69
Schizotypal	59.38	24.71	.64
Borderline	56.40	24.23	.84
Paranoid	70.82	20.15	.79

*Note.* N=438 for all scales. SD = Standard Deviation. TRST = Therapeutic Reactance Scale total score. MCMI-III = Millon Clinical Multiaxial Inventory III.

Dowd, et al.'s (1991) original norming sample, which was 68.87 (SD= 7.19), with slightly less variability. Dowd, et al.'s sample originated from a large Northern university. Seemann, et al. (under review) obtained a mean TRS:T score of 76.44 (SD= 11.29) with a college student population in a mid-sized Southern university. Huck (1998) found a mean TRS:T score of 69.7 (SD=11.3) with a population similar to Dowd, et al.'s (1991) original norming sample. Buboltz, et al. (1999) obtained a mean of 69.3 on the TRS (SD=11.3), also with a student population from a mid-sized Southern university.

Comparing the current sample's mean base rate scores with those from the original norming sample is somewhat difficult. Unlike mean scores from other instruments, the base rate scores from the MCMI-III reflect the prevalence of a particular set of behaviors and personality styles within the population. A base rate score of 60 reflects the median score of the general population, and this score is intended to be indicative of the *normal* person's endorsement of the items of a given scale. The higher the base rate score, the more a person endorses the behaviors and personality pattern of a given scale. Thus, a base rate score of 60 is considered normative for all MCMI-III scales. As noted in Table 1, the mean base rate scores obtained from the current sample generally conform to the normative median for most scales, but the paranoid scale's mean of 70.82 appears elevated, indicating a higher rate of endorsement of paranoid traits by the participants in the current sample. The histrionic, compulsive, and dependent scale scores from the current sample appear depressed (44.54, 47.83, 51.03, respectively), indicating a somewhat lower endorsement of traits associated with these scales by the current sample. These results are interpreted further in Chapter 4.

### *Correlations*

This section contains an examination of the correlation matrix of all variables, the obtained reliability of the TRS, and the predicted internal consistency of the MCMI-III.

A correlation matrix of all variables used in hypothesis testing was compiled and examined. This matrix indicates that the personality scales of the MCMI-III were slightly to moderately intercorrelated, and qualitatively-similar scales tended to produce stronger intercorrelations than they did with dissimilar scales. Scale 6A (Antisocial) and Scale 6B (Aggressive-Sadistic), for example, are qualitatively similar but empirically distinct scales; the correlation between 6A and 6B was the highest obtained for any two scales ( $r = .55, p < .001$ ). Scale 1 (Schizoid) and Scale 2A (Avoidant) are also qualitatively similar, and the correlation between these scales was unsurprisingly robust, producing the second highest correlation noted ( $r = .42, p < .001$ ). All other correlations obtained between the personality scales had magnitudes less than than  $r = .38$ . Many failed to achieve statistical significance.

The Total Score of the TRS (TRS:T) demonstrated slight correlations with the personality scales. The highest obtained correlation ( $r = .22, p < .001$ ) was obtained between TRS:T and Scale 6B (Aggressive-Sadistic), while the lowest correlation ( $r = .01, p < .801$ ) was observed between TRS:T and Scale 4 (Histrionic). A summary of the correlations between the personality scales of the MCMI-III and the TRS:T is detailed in Table 2.

Reliability estimates for the MCMI-III and TRS:T demonstrate some variability from scale to scale but are considered acceptable. Cronach's Alpha, a measure of internal consistency, was used to gauge the internal consistency reliability of each scale. This statistic tests the degree to which items on a scale intercorrelate. Higher numbers are generally better, but numbers that are too high indicate that the scale items are essentially the same with minimal semantic

differences. In other words, a scale with an alpha of .99 may be criticized as having insufficient diversity in its item pool, while one with a low alpha (such as .4) may be seen as internally inconsistent. An unreliable scale yields little useful information; if the items do not tap the same construct, then the total of those items has little meaning (and poor validity). A scale with a very high coefficient alpha is likely limited in that the items of this scale, being essentially (if not semantically) the same, tap only one aspect of a construct. This is a serious validity consideration for scales designed to measure multifaceted and complex constructs such as personality style or psychopathology.

The range of coefficient alphas obtained for the clinical personality patterns (schizoid, avoidant, depressive, dependent, histrionic, narcissistic, antisocial, aggressive-sadistic, compulsive, passive-aggressive [negativistic], and masochistic [self-defeating] scales) of the MCMI-III was .46-.87, and the range for the severe personality syndromes (schizotypal, borderline, and paranoid scales) was .64-.85. The lowest coefficient alpha for the clinical personality patterns was .46 for the compulsive scale, with the narcissistic scale producing a negligibly higher alpha of .47. The antisocial scale also produced a questionable alpha of .57. While these scales will be included in the final analyses for hypothesis testing, they are generally insufficient to comfortably assume scale reliability. Therefore, any results based on these scales must be interpreted with caution.

The strongest alphas for the clinical personality patterns were produced by the schizoid (.73), avoidant (.81), depressive (.80), and dependent (.77) scales. The aggressive-sadistic (.76), histrionic (.71), antisocial (.71), passive-aggressive (.68), masochistic (.69), compulsive (.65), and narcissistic (.62) scales all produced acceptable coefficient alphas. The alphas produced here

are generally lower than those reported in the MCMI-III Professional Manual (Davis & Millon, 1997), but they are generally sufficient for the assumption of internal consistency.

The schizotypal scale produced the lowest coefficient alpha of the three severe personality syndrome scales with an alpha of .64; the borderline scale produced an alpha of .84; the paranoid scale produced an alpha of .79. While these estimates of reliability are not as large as those reported for the MCMI-III's various norming samples (Davis & Millon, 1997), they are sufficient to allow for the assumption of scale reliability.

The coefficient alpha obtained for the TRS:T with this sample was .69. This alpha is somewhat lower than the range of .75-.84 noted in the literature (Buboltz, et al., 1999; Huck, 1998; Seibel & Dowd, 1999). These results are not surprising; the bulk of the psychological reactance research to date has used college student populations. Given the potential differences in personal motivation and environmental influences at work on prison inmates, some difference in reliability estimates and other statistics is to be expected. Despite these findings, the TRS:T's coefficient alpha suggests that the scale is sufficiently reliable for use with an inmate population.

#### *Correlations Between Test Variables and Considerations for Analysis*

Correlations between test variables, especially between the independent variables in a multiple regression procedure, can potentially violate the assumptions of independence of predictors. A potential hazard is that the Ordinary Least Squares (OLS) method of estimating regression coefficients may not be the most appropriate. OLS is generally the most robust method, but it also carries several inviolate assumptions. Multicollinearity, or the existence of a significant relationship between predictors that could affect estimated beta weights, is of a particular concern with respect to the scales of the MCMI-III because several of these scales share overlapping items. Tabachnik and Fidel (1989) recommend removing one variable from

statistical consideration if the correlation between it and another variable is greater than .70. None of the variables in the current study correlate to such a degree, indicating that removal from statistical consideration is not appropriate. Grimm and Yarnold (1995) suggest examining the residual plots of the variables in question to determine if some correction for multicollinearity is in order. An examination of these plots revealed a typical scatter diagram; partial plots produced indicated that variables highly correlated with each other (such as 6A and 6B) demonstrated differential correlations with TRS:T. As such, it is appropriate to proceed with the planned analyses without further concern of multicollinearity.

### *Results By Hypothesis*

In this section the results of the 10 formal hypotheses are presented. Hypothesis 1 compared the mean level of psychological reactance obtained from the inmate sample with that of an archive sample of college students. Hypothesis 2 examined the potential differences in TRS:T scores in terms of race; due to power considerations, only African-Americans and Caucasians were included in this analysis. Hypotheses 3, 4, and 5 made specific predictions regarding the predictive power of the individual MCMI-III clinical personality pattern scales to estimate TRS:T scores. Hypotheses 6, 7, and 8 made specific predictions regarding the predictive power of the individual MCMI-III severe personality scales to estimate TRS:T scores. Hypotheses 9 and 10 made specific directional predictions regarding the expected relationships between level of psychological reactance and MCMI-III clinical personality pattern scales.

### *Hypothesis 1*

The first hypothesis tested the prediction that the mean level of TRS:T scores in an inmate sample would be significantly higher than those obtained from a sample of college students. This hypothesis was tested using an independent samples t-test. The inmate sample

from the current study ( $N = 438$ ) produced a mean of 68.87 and a SD of 6.75, and the archive sample of college students ( $N = 249$ ) demonstrated a mean of 70.75 with a SD of 8.77. The obtained  $t = .0059, p > .05$  was not significant at the .05 level; thus, this hypothesis was not supported.

### *Hypothesis 2*

The second hypothesis tested the prediction that, consistent with past research, African-Americans would demonstrate significantly higher TRS:T scores than Caucasians, but that the obtained difference would not be clinically or operationally significant. This hypothesis was tested using one-way ANOVA. The African-American participants from the current study ( $N = 286$ ) produced a mean of 68.81 and a standard deviation of 7.03, and the Caucasian participants ( $N = 118$ ) demonstrated a mean of 68.20 with a standard deviation of 6.51. The obtained  $F = .598, p > .05$ , is not significant at the .05 level; thus, this hypothesis was not supported. In fact, the difference between the mean TRS:T scores for African-Americans and Caucasians is less than one point.

Table 2

*Correlations Between MCMI-III Scales and TRS Total Score*

Scale	1	2	3	4	5	6	7	8	9
1. TRS:T	-----	-----	-----	-----	-----	-----	-----	-----	-----
2. Schizoid	.05	-----	-----	-----	-----	-----	-----	-----	-----
3. Avoidant	.02	.42**	-----	-----	-----	-----	-----	-----	-----
4. Depressive	-.14**	.13**	.17**	-----	-----	-----	-----	-----	-----
5. Dependent	-.16**	-.10*	.13**	.28**	-----	-----	-----	-----	-----
6. Histrionic	.01	-.24**	-.16**	.01	.04	-----	-----	-----	-----
7. Narcissistic	.14**	.14**	-.01	-.18**	-.28**	.24**	-----	-----	-----
8. Antisocial	.05	.03	-.10*	-.05	-.18**	.25**	.13**	-----	-----
9. Agg-Sad	.22**	.01	-.05	-.07	-.15**	.11*	.21**	.55**	-----
10. Compul	-.10	.21**	.25**	.17**	.07	-.11*	-.02	-.33**	-.40**
11. Passive	.11*	.23**	.07	-.16**	-.18**	.05	.28**	.17**	.20**
12. Self-Def	-.06	.09	.18**	.17**	.08	.09	-.02	.19**	.01
13. Schizotyp	.11*	.35**	.42**	.04	-.02	-.02	.10*	-.05	.03
14. Borderline	.08	-.03	-.08	-.01	-.06	.14**	.08	.39**	.24**
15. Paranoid	.19**	.21**	.20**	-.18**	-.17**	-.11*	.35**	-.14**	.10*

*Note.* Table 1 continues on the following page. N = 438 for all scales. TRS = Therapeutic Reactance Scale. MCMI-III = Millon Clinical Multiaxial Inventory III. Agg-Sadistic = Aggressive-Sadistic Scale. Passive = Passive-Aggressive Scale. Self-Defeat = Self Defeating Scale. \*  $p < .05$  \*\*  $p < .01$ .



Table 2 (Continued)

*Correlations Between MCMI-III Scales and TRS Total Score*

Scale	10	11	12	13	14	15
10. Compulsive	-----	-----	-----	-----	-----	-----
11. Passive-Aggressive	-.08	-----	-----	-----	-----	-----
12. Self-Defeating	.10*	.04	-----	-----	-----	-----
13. Schizotypal	.10*	.11*	.18**	-----	-----	-----
14. Borderline	-.15**	.25**	.21**	.03	-----	-----
15. Paranoid	.02	.37**	-.10*	.38**	-.04	-----

*Note.* Table 1 continues from the previous page. N = 438 for all scales. TRS = Therapeutic Reactance Scale. MCMI-III = Millon Clinical Multiaxial Inventory III. \*  $p < .05$  \*\*  $p < .01$ .

*Hypothesis 3, 4, 5, 6, 7, and 8.*

To test hypotheses 3 through 8, a stepwise multiple regression analysis was conducted, the details of which are listed in Table 3. For the TRS:T  $R^2 = .311$  with an adjusted  $R^2$  of .306;  $F(3, 434) = 65.233, p < .001$ . The Standard Error of the estimate was 5.62. These results indicate that 31.1% of the variance of the TRS:T was accounted for by the MCMI-III scales retained in the final regression model with the adjusted  $R^2$  indicating that 30.6% of the TRS:T's variance is explained by personality in the current data. One of the MCMI-III's clinical personality patterns and two of the severe personality syndromes demonstrated statistical significance in the final model for the whole sample, aggressive ( [sadistic], hereafter, aggressive) ( $\beta = .290, p < .001$ ), Paranoid ( $\beta = .277, p < .001$ ), and Borderline ( $\beta = .106, p < .039$ ). The other MCMI-III scales did

not emerge as significant predictors and were not retained in the final regression solution. The individual hypotheses tested with this procedure are noted below.

The regression procedure used here employed a number of distinct iterations to achieve the solution of best fit. The procedure selects a single predictor from the available pool of independent variables (in this case, the 14 MCMI-III scales) in each iteration, beginning with the variable that has the greatest predictive weight and accounts for the largest single portion of unique variance. Predictors chosen in subsequent iterations are therefore less powerful but still account for a significant portion of unique variance. This occurs until there are no remaining predictors with sufficient predictive weight to be retained. The remaining variables are excluded from the final regression solution (see the continuation of Table 3). The chief strength of such a procedure is a final model that contains only predictors that best account for the largest possible portion of the variance in the dependent variable, and redundant variables, sometimes referred to as pseudo-predictors, are not retained in the final model. A weakness of this approach is that variables retained earlier in the procedure may account for sufficiently large portions of the unique variance that, after a few iterations, there is simply no variance remaining for weaker but otherwise valid predictors to utilize, and thus they are excluded.

To avoid the potential pitfall of excluding potentially significant and useful independent variables, and to verify that the predictors in the final regression solution actually do provide the model of best fit, a standard simultaneous multiple regression was conducted. While the stepwise procedure is a more robust test, the simultaneous regression is not subject to the specific limitations outlined above. In this procedure, all of the independent variables are entered into the equation at once, and the relationship between each individual variable and the dependent measure is presented. The simultaneous multiple regression procedure demonstrated  $R^2 = .323$ ,

adjusted  $R^2 = .301$ , and  $F(14, 423) = 14.443, p < .001$ . The Standard Error of the estimate was 31.822. The significant predictors identified in the simultaneous regression analysis confirmed the results of the stepwise regression solution. The aggressive ( $\beta = .312, p < .001$ ), paranoid ( $\beta = .177, p < .009$ ), and borderline ( $\beta = .142, p = .05$ ) scales achieved predictive significance, and the variables excluded in the stepwise analysis were likewise not identified as relevant predictors in the simultaneous procedure. These results are sufficiently similar to those demonstrated by the more robust stepwise procedure, and analysis and interpretation of those results may continue.

### *Hypothesis 3*

The third hypothesis tested the prediction that the avoidant, depressive, and self-defeating personality styles should predict significantly lower levels of psychological reactance. None of these scales were retained in the final regression solution, and this hypothesis was not supported. It is interesting that the depressive personality style generated a mild but significant negative correlation with TRST scores, but was not retained in the final regression solution. It is possible that the depressive scale correlates with another predictor that has a greater share of unique variance. This and other possibilities are addressed in the Discussion section.

### *Hypothesis 4*

Based on a modified version of Huck's 1998 theoretical formulation the fourth hypothesis predicted that the dependent and histrionic personality styles should predict significantly lower levels of psychological reactance. Neither of these scales were retained in the final regression solution, and this hypothesis was not supported. The dependent personality style generated a mild and significant negative correlation with TRST scores, but was not retained in the final regression solution. It is possible that the dependent scale has insufficient overall variability in the current

sample (see Table 1) to emerge as a significant predictor of psychological reactance. This and other possibilities are considered in the Discussion section.

#### *Hypothesis 5*

The fifth hypothesis stated that the aggressive and the antisocial personalities should predict significantly higher levels of psychological reactance. The aggressive personality pattern ( $\beta = .290, p < .001$ ) was retained in the final regression solution, indicating that as scores on the aggressive scale rise, TRST scores will tend to rise as well. The aggressive personality pattern is a significant predictor of psychological reactance as measured by the TRS:T. This finding supports this aspect of the fifth hypothesis.

The antisocial scale was not retained in the final regression solution, however, and thus is not a predictor of psychological reactance. This aspect of the fifth hypothesis was not supported.

#### *Hypothesis 6*

The sixth hypothesis indicated that the schizotypal personality is expected to predict significantly lower levels of psychological reactance. This severe personality syndrome was not retained in the final regression model, and thus this hypothesis was not supported.

#### *Hypothesis 7*

The seventh hypothesis tested the prediction that the borderline personality should predict significantly higher levels of psychological reactance. The borderline personality was retained in the final regression model ( $\beta = .106, p < .039$ ), indicating that as scores on the borderline scale increase, psychological reactance scores will also tend to increase. This hypothesis was fully supported by these results.

*Hypothesis 8*

The eighth hypothesis stated that the paranoid personality is expected to predict significantly higher levels of psychological reactance. The paranoid personality was retained in the final regression solution ( $\beta = .277, p < .001$ ); this hypothesis was fully supported by these results.

*Hypotheses 9 and 10*

A MANOVA was conducted with levels of TRS:T (high, moderate, and low) as the sole independent variable and the 14 clinical and severe personality scales as continuous dependent variables. While not specifically part of the a priori predictions, the three severe personality scales were included for continuity. All dependent variables achieved statistical significance, indicating that mean scores of a given MCMI-III scale were significantly different across the levels of psychological reactance. The details of the MANOVA results appear in Table 4.

All personality scales achieved statistical significance at the  $p < .001$  level, with the exception of the Narcissistic scale ( $p < .039$ ) and the Histrionic scale ( $p < .002$ ). Mean Square Error terms (MSE), detailed in full for each scale in Table 5, ranged from a low of 170.34 for the Histrionic scale to a high of 765.97 for the Depressive scale. Scales specified in hypotheses 9 and 10 are presented in greater detail below.

Table 3

*Summary of a Stepwise Regression Analysis of 14 MCMI-III Scales onto TRS Total Score*

Variable	<i>B</i>	<i>SE B</i>	$\beta$	Sig.
Aggressive	.110	.020	.290**	.001
Paranoid	.090	.016	.270**	.001
Borderline	.029	.014	.106*	.039
$R^2$	.311			
$R^2$ (Adjusted)	.306			
<i>F</i>	65.22			
<i>df</i>	3, 434			
$p <$	.001			

*Note.* The above scales were retained in the final regression solution. Table 3 continues on the following page with variables excluded from the final regression model. N = 438 for all scales. MCMI-III = Millon Clinical Multiaxial Inventory III. TRS = Therapeutic Reactance Scale.

\*  $p < .05$  \*\*  $p < .001$ .

Table 3 (Continued)

*Variables Excluded From the Final Regression Model*

Variable	Beta In	<i>t</i>	Sig
Schizoid	.008	.17	.865
Avoidant	.001	-.01	.992
Depressive	-.053	-1.03	.302
Dependent	-.054	-1.22	.225
Histrionic	.039	.86	.389
Narcissistic	.062	1.42	.158
Antisocial	-.060	-.99	.321
Compulsive	.020	.40	.691
Passive-Aggressive	.050	.72	.473
Self-Defeating	-.022	-.40	.692
Schizotypal	.064	1.12	.264

*Note.* Table 3 continues from the preceding page. Sig = Significance.

*Hypothesis 9*

The ninth hypothesis stated that psychological reactance should have a strong positive relationship with the compulsive, passive-aggressive, aggressive, antisocial, and narcissistic personality styles. A priori comparisons indicated that each of these scales demonstrated higher mean scores when the level of psychological reactance was high, and lower mean scores when the level of psychological reactance was low.

Table 4

*MANOVA of 14 MCMI-III Personality Scales and TRS*


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Between Subjects Factors						
Independent Variable	Level of TRST	N				
Level of TRST	1.00 (Low)	55				
	2.00 (Moderate)	297				
	3.00 (High)	86				

Multivariate Tests						
Source	Test Performed	Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.984	1871.006	14.000	422.000	< .001
	Wilks' Lambda	.016	1871.006	14.000	422.000	< .001
	Hotelling's Trace	62.071	1871.006	14.000	422.000	< .001
	Roy's Largest Root	62.071	1871.006	14.000	422.000	< .001
TRSTLVL	Pillai's Trace	.313	5.598	28.000	846.000	< .001
	Wilks' Lambda	.705	5.767	28.000	844.000	< .001
	Hotelling's Trace	.395	5.937	28.000	842.000	< .001
	Roy's Largest Root	.318	9.611	14.000	423.000	< .001

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*Note.* Table 4 continues on the following page. These tests indicate significant multivariate effects. TRS= Therapeutic Reactance Scale. TRST= Therapeutic Reactance Scale total score. TRSTLVL = Therapeutic Reactance Scale Total Score level (high, moderate, or low). MCMI-III = Millon Clinical Multiaxial Inventory III. N=438 for all tests.



Table 4 (Continued)

*MANOVA of 14 MCMI-III Personality Scales and TRS*


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Between-subjects effects: Level of TRST					
Dep. Variable	Sum of Squares	df	Mean Square	F	Sig.
Schizoid	10391.063	2	5195.532	13.10	<.001
Avoidant	24869.302	2	12434.651	20.23	<.001
Depressive	23373.785	2	11686.893	15.26	<.001
Dependent	14262.252	2	7131.126	12.29	<.001
Histrionic	2111.160	2	1055.580	6.20	<.002
Narcissistic	2099.851	2	1049.926	3.28	<.039
Antisocial	11513.808	2	5756.904	17.61	<.001
Agg. Sadistic	22568.362	2	11284.181	42.74	<.001
Compulsive	7763.282	2	3881.641	18.73	<.001
Passive-Agg	43784.973	2	21892.487	41.04	<.001
Self-Defeating	28536.114	2	14268.057	20.94	<.001
Schizotypal	36386.622	2	18193.311	34.36	<.001
Borderline	38844.595	2	19422.298	38.81	<.001
Paranoid	25132.814	2	12566.407	35.88	<.001

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*Note.* Table 4 continues from the previous page and continues on the following page.

TRS= Therapeutic Reactance Scale. TRSTLVL = Therapeutic Reactance Scale total score level (high, moderate, or low). MCMI-III = Millon Clinical Multiaxial Inventory III.

Agg.= Aggressive. N=438 for all tests.

Table 4 (Continued)  
 MANOVA of 14 MCMI-III Personality Scales and TRS

Dep. Variable	Between-Subjects Effects: Error		
	Sum of Squares	df	Mean Square
Schizoid	172594.90	435	396.770
Avoidant	267388.79	435	614.687
Depressive	333196.19	435	765.968
Dependent	252440.24	435	580.322
Histrionic	74099.52	435	170.344
Narcissistic	139326.52	435	320.291
Antisocial	142191.35	435	326.877
Aggressive-Sadistic	114851.49	435	264.026
Compulsive	90134.22	435	207.205
Passive-Aggressive	232076.30	435	533.509
Self-Defeating	296419.44	435	681.424
Schizotypal	230348.94	435	529.538
Borderline	217722.28	435	500.511
Paranoid	152359.30	435	350.251

*Note.* Table 4 continues from the previous page. TRS= Therapeutic Reactance Scale. MCMI-III = Millon Clinical Multiaxial Inventory III. N=438 for all tests.

The means for each of the five dependent variables included in hypothesis 9 are listed with respect to high, moderate, and low levels of reactance in Table 5. The Compulsive scale generated  $F = 18.73$ ,  $MSE = 207.21$ ,  $p < .001$ . The difference between mean Compulsive scale scores for high versus low levels of psychological reactance was  $-14.39$  with a Standard Error (SE) of  $2.49$ ,  $p < .001$ . The difference between mean Compulsive scale scores for high versus moderate levels of psychological reactance was  $-8.54$ ,  $SE = 1.76$ ,  $p < .001$ . The difference between mean Compulsive scale scores for moderate versus low levels of psychological reactance was  $-5.84$ ,  $SE = 2.11$ ,  $p < .006$ . Contrary to the prediction made by this hypothesis, low levels of psychological reactance are predictive of higher scores on the compulsive scale, and a high level of psychological reactance is predictive of lower scores on the compulsive scale.

Table 5

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*Means, by Level of Psychological Reactance, for the five Personality Patterns in Hypothesis 9*

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Scale	Low TRST	Mod TRST	High TRST	Overall Mean
1. Compulsive	54.62	48.77	40.23	47.38
2. Passive-Agg	43.24	65.58	79.36	65.48
3. Antisocial	58.09	68.69	76.58	68.91
4. Agg-Sadistic	45.80	60.74	71.70	61.01
5. Narcissistic	61.42	65.31	69.20	65.68

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*Note.* TRST = Therapeutic Reactance Scale. Mod = Moderate. Passive-Agg = Passive-Aggressive. Agg-Sadistic = Aggressive-Sadistic. High TRST scores are those one or more standard deviations (SD) above the mean. Low TRST scores are those one or more SD below the mean. Moderate TRST scores are within one SD of the mean. Overall Mean is the whole sample mean.

The passive-aggressive scale generated  $F = 41.04$ ,  $MSE = 533.51$ ,  $p < .001$ . The difference between mean passive-aggressive scale scores for high versus low levels of psychological reactance was 36.12 with a  $SE = 3.99$ ,  $p < .001$ . The difference between mean passive-aggressive scale scores for high versus moderate levels of psychological reactance was 13.78,  $SE = 2.83$ ,  $p < .001$ . The difference between mean passive-aggressive scale scores for moderate versus low levels of psychological reactance was 22.34,  $SE = 3.39$ ,  $p < .001$ .

The aggressive scale generated  $F = 42.74$ ,  $MSE = 264.03$ ,  $p < .001$ . The difference between mean aggressive scale scores for high versus low levels of psychological reactance was 25.90 with a  $SE = 2.81$ ,  $p < .001$ . The difference between mean aggressive scale scores for high versus moderate levels of psychological reactance was 10.95,  $SE = 1.99$ ,  $p < .001$ . The difference between mean aggressive scale scores for moderate versus low levels of psychological reactance was 14.94,  $SE = 2.39$ ,  $p < .001$ .

The antisocial scale generated  $F = 17.61$ ,  $MSE = 326.88$ ,  $p < .001$ . The difference between mean Antisocial scale scores for high versus low levels of psychological reactance was 18.49 with a  $SE = 3.12$ ,  $p < .001$ . The difference between mean antisocial scale scores for high versus moderate levels of psychological reactance was 7.89,  $SE = 2.81$ ,  $p < .001$ . The difference between mean antisocial scale scores for moderate versus low levels of psychological reactance was 10.60,  $SE = 2.65$ ,  $p < .001$ .

The narcissistic scale generated  $F = 3.28$ ,  $MSE = 320.29$ ,  $p < .039$ . The difference between mean narcissistic scale scores for high versus low levels of psychological reactance was 7.78 with a  $SE = 3.09$ ,  $p < .012$ . The difference between mean narcissistic scale scores for high versus moderate levels of psychological reactance was 3.89,  $SE = 2.19$ ,  $p < .077$ . The difference

between mean narcissistic scale scores for moderate versus low levels of psychological reactance was 3.89,  $SE = 2.63$ ,  $p < \text{not significant}$ .

These results provide strong support for hypothesis 9. With the exception of the narcissistic scale and the compulsive scale, three of the five scales demonstrated the predicted results, indicating that the passive-aggressive, aggressive-sadistic, and antisocial personality styles share a positive relationship with psychological reactance, and the mean MCMI-III scores for these constructs are significantly different given the level of psychological reactance. The scores for the narcissistic scale are significantly different when psychological reactance level is high versus low, but the difference is not significant when psychological reactance is moderate versus high or moderate versus low. The compulsive scale, on the other hand, performed in exactly the opposite direction as predicted, indicating an inverse relationship between psychological reactance and the compulsive personality scale.

#### *Hypothesis 10*

The tenth hypothesis stated that psychological reactance should have a strong inverse relationship with the dependent, avoidant, and schizoid personality styles. Interestingly, this hypothesis was not supported, and the opposite results were obtained. A priori comparisons indicated that each of these scales demonstrated higher mean scores when the level of psychological reactance was high and lower mean scores when the level of psychological reactance was low.

The means for each of the five dependent variables included in hypothesis 10 are listed with respect to high, moderate, and low levels of reactance in Table 6. The dependent scale generated  $F = 12.29$ ,  $MSE = 580.32$ ,  $p < .001$ . The difference between mean dependent scale scores for high versus low levels of psychological reactance was 17.53 with a  $SE = 4.16$ ,  $p <$

.001. The difference between mean dependent scale scores for high versus moderate levels of psychological reactance was .407,  $SE = 2.95$ ,  $p < .89$ . The difference between mean scores for moderate versus low levels of psychological reactance was 17.12,  $SE = 3.54$ ,  $p < .001$ .

The avoidant scale generated  $F = 20.23$ ,  $MSE = 396.77$ ,  $p < .001$ . The difference between mean avoidant scale scores for high versus low levels of psychological reactance was 26.58 with a  $SE = 4.28$ ,  $p < .001$ . The difference between mean avoidant scale scores for high versus moderate levels of psychological reactance was 6.88,  $SE = 3.04$ ,  $p < .001$ . The difference between mean scale scores for moderate versus low levels of psychological reactance was 19.70,  $SE = 3.64$ ,  $p < .001$ .

Table 6

*Means, by Level of Psychological Reactance, for the five Personality Patterns in Hypothesis 10*

Scale	Low TRST	Mod TRST	High TRST	Overall Mean
1. Schizoid	52.49	64.93	69.80	64.32
2. Avoidant	37.45	57.25	64.13	56.13
3. Dependent	35.98	53.10	53.51	51.03

*Note.* TRST = Therapeutic Reactance Scale. Mod = Moderate. High TRST scores are one or more SD's above the mean. Low TRST scores are one or more SD's below the mean. Moderate TRST scores fall within one SD of the mean. Overall Mean is the scale mean for the whole sample.

The schizoid scale generated  $F = 13.10$ ,  $MSE = 396.77$ ,  $p < .001$ . The difference between mean schizoid scale scores for high versus low levels of psychological reactance was 17.31,  $SE = 3.44$ ,  $p < .001$ . The difference between mean schizoid scale scores for high versus moderate

levels of psychological reactance was 4.87 with a  $SE = 2.44$ ,  $p < .001$ . The difference between mean scale scores for moderate versus low levels of psychological reactance was 19.70,  $SE = 3.64$ ,  $p < .001$ .

Hypothesis 10 was not supported, and the results are the opposite of those predicted. The mean dependent, avoidant, and schizoid scale scores were positively related to psychological reactance level, indicating that when reactance is high, these scales will generally demonstrate higher scores than when reactance is low. The avoidant and schizoid scales' mean scores were significantly different when psychological reactance was high, moderate, or low. The scores for the dependent scale were significantly different when psychological reactance level is high versus low, but the difference is not significant when psychological reactance is moderate versus high or moderate versus low.

### Summary

In this chapter the results of 10 hypotheses were presented as well as sample characteristics, correlations, and considerations for analysis. Table 7 summarizes the results of the 10 research hypotheses.

Table 7

*Summaries of primary research hypotheses*

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H1	The mean level of TRST scores in an inmate sample was not different from that of a sample of college students.
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H2	The mean TRST scores of African-Americans and Caucasians were not found to be significantly different.
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Table 7 (Continued)

*Summaries of primary research hypotheses*


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H3	Avoidant, depressive, and self-defeating personality styles were not retained in the final regression solution and thus failed to predict significantly lower levels of psychological reactance.
H4	Dependent and histrionic personality were not retained in the final regression solution and thus failed to predict significantly lower levels of psychological reactance.
H5	The aggressive-sadistic personality style was retained in the final regression solution and was found to predict higher levels of psychological reactance. Antisocial personality style was not retained and did not predict higher levels of psychological reactance.
H6	The Schizotypal personality pattern was not retained in the final regression solution and did not predict lower levels of psychological reactance.
H7	The Borderline personality pattern was retained in the final regression solution and predicted higher levels of psychological reactance.
H8	The Paranoid personality pattern was retained in the final regression solution and predicted higher levels of psychological reactance.
H9	The compulsive, passive-aggressive, aggressive-sadistic, antisocial, and narcissistic personality styles demonstrated strong positive relationships with psychological reactance. When reactance is high, these scales are elevated, and when reactance is low, these scales are suppressed.
H10	The dependent, avoidant, and schizoid personality styles did not demonstrate an inverse relationship with psychological reactance; in fact, a strong positive relationship was observed.

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## CHAPTER 4

### Discussion

The discussion of the current study's findings will begin with a description of the final sample, followed by a presentation of the preliminary analyses. The ten formal hypotheses will then be reviewed and discussed in turn. A general discussion of these results will follow, highlighting the significant findings that were dependent on the outcome of the formal hypotheses. Unexpected findings will be discussed next, followed by the limitations of the study and suggestions for future research.

The current study had, as its primary focus, the confirmation of a modified version of Huck's (1998) grounding of psychological reactance within Millon's (1994) framework. Empirical predictions of relationships between psychological reactance and certain personality styles based on behaviors identified as characteristic of high levels of reactance from prior research was also of interest. As a secondary focus, this study sought to extend the current research from a college population to a clinical sample, in this case medium-security male inmates.

The current sample of medium-security inmates produced generally normative mean base rate scores for the MCMI-III's 15 personality scales; all scales except one produced mean base rates lower than 70. The mean base rate scores for all scales are displayed in Table 1. The Paranoid scale produced a mean base rate of 70.82 (SD=20.15). While this does not indicate that, on average, the inmates in the current sample possessed paranoid traits, it does indicate that this personality pattern was endorsed more frequently by inmates than by the general population. This scale also produced sufficient variability to indicate that approximately 42% of the

respondents produced a base rate score of 75 or higher. This is an interesting finding in that the paranoid personality pattern is considered by Millon, et al., (1997) to be always unhealthy or, in its extremes, pathological. These results suggest that 42% of the current sample of inmates likely endorses the unhealthy paranoid pattern of interpersonal functioning. Some of the inmates in the current sample may possess a paranoid personality style at a pathological level.

Two scales in the current study demonstrated mean base rate scores below 50; the Histrionic scale produced a mean of 44.54 (SD= 13.21), and the Compulsive scale's mean was 47.83 (SD=14.97). The variability of these scales is sufficiently restricted to grossly limit the number of respondents who produced normative base rate scores. This restricted variability also indicates that few respondents would have elevated either scale beyond a base rate of 75. These results indicate that this personality pattern was endorsed at a significantly lower rate by the inmates in the current sample than by members of the MCMI-III's norming group. It is interesting that these two scales should be suppressed across the whole sample; according to Strack (1999), these scales are positively correlated with other measures of healthy emotional adjustment and interpersonal functioning.

These results suggest that, compared to a non-inmate population, the current sample is, on average, has a tendency towards unhealthy personality types and specific deficits of interpersonal functioning. Inmates who endorse the paranoid personality beyond a base rate of 74 likely flavor their interactions with others in a hypervigilant, suspicious, and nonconforming manner. Those that fail to endorse the compulsive and histrionic personality styles at normative levels may, as Strack (1999) implies, possess interpersonal deficits in healthy emotional expression and adjustment.

*Preliminary Analyses: TRS:T and MCMI-III Scale Correlations*

As expected, the scales of the MCMI-III tended to intercorrelate. The various personality styles represented are not necessarily orthogonal, and several of the scales can be theoretically grouped into similar categories. Additionally, theoretically unrelated scales can be expected to produce statistically significant but generally mild correlations, mostly because personality among individuals is a complex phenomenon that resists even the most dedicated efforts to categorize into distinct or exclusive groups. Millon, et al., (1997) recognized this challenge of personality research and categorization. He integrated more than one significant scale elevation into a profile, or type. One who endorses a dependent personality with a base rate score of 85 is expected to be quiet, obsequious, and content if nurtured, but if that elevation is accompanied by an endorsement of the depressive personality with a base rate of 75 or higher, that person will likely project perpetual gloom and negative affect while still seeking nurture and behaving in a helpless manner.

The schizoid, avoidant, depressive, and dependent scales are theoretically similar in that they all endorse one manner or another of a passive or distant stance regarding social relationships. The schizoid and avoidant scales produced a statistically significant correlation of .42; individuals with these personality styles tend to distance themselves from others, and the schizoid and avoidant scales of the MCMI-III clearly share a degree covariance. The depressive and dependent scales are also similar in that they both look to others for nurture and do not view themselves as capable of meeting their needs without aid. The dependent personality actively seeks nurture, while the depressive has all but given up and passively awaits someone to care for him or her. As such, these scales produced a correlation of .28. The shared variance is likely the other-focus (Millon's self-other dichotomy) in meeting needs, even though they clearly differ in

their respective approaches to gaining nurture. The dependent scale demonstrated a mild negative correlation with the schizoid scale, and this is congruent with the difference between the dependent scale's active solicitation of nurture from others as opposed to the schizoid's tendency to distance himself or herself from others and to be self-reliant.

The histrionic and narcissistic personality styles are similar in that they are both characterized by intense emotionality and self-awareness. The histrionic personality style is characterized by its display of strong emotions and the perception of self as an emotional being with strong affective reactions to interactions with others. On the other hand, a person with a more narcissistic style experiences strong emotions as they relate to the self, and such a person perceives the self as important and deserving of positive regard from others, often simply for being *special*. Unsurprisingly, these scales produced a correlation of .24. The narcissistic scale was negatively correlated with the depressive and dependent scales, and observed correlations were -.18 and -.28, respectively. This is unsurprising in that depressive and dependent styles view themselves as needing the nurture of others, whereas the narcissistic scale presents a significantly stronger perception of their own ability to meet personal needs. The narcissistic scale was significantly correlated .14 with the schizoid scale, a finding that likely underscores the related but distinct views on the importance of personal independence characteristic of these styles.

In contrast to the narcissistic scale, the histrionic scale was unrelated to the depressive and dependent scales and negatively correlated with the avoidant and schizoid scales, producing correlations of -.16 and -.24, respectively. The relationship demonstrated here is clear; the histrionic style contacts others and is emotionally expressive, while the schizoid and avoidant styles distance themselves from others and are emotionally constrained.

The antisocial and aggressive ([sadistic]; hereafter, aggressive) styles are similar in that they both view the self as being of primary importance, and that everything and everyone in the environment is a resource for their use. Both are also characterized to some degree by a lack of respect for social order, preferring self-governance, and a lack of compassion and remorse for others, unless loss somehow impacts the individual personally. The antisocial style is more manipulative and the aggressive style tends toward engaging in conflict with others, often including physically assaultive behavior. These styles, while conceptually distinct, share a number of similar behaviors and attitudes, and are correlated .55 with each other. The aggressive scale is positively correlated with the narcissistic scale, producing a correlation of .21; this highlights the similarities between the importance placed on the self in these personality patterns. The aggressive scale is negatively correlated (-.15) with the dependant scale, highlighting the difference between the aggressive style's independence and perception of personal power over the dependent style's view of the self as needing others to provide nurture.

The antisocial personality style was similarly related to the narcissistic personality and negatively related to the dependent style, with obtained correlations of .13 and -.18, respectively. Unlike the aggressive scale, the antisocial personality style produced a significant but moderate correlation with the histrionic style. This observed correlation of .25 likely indicates the similarity between these scales' perception of the self as important and active in meeting their needs, differing in the means used to achieve their aims. According to theory, the aggressive scale is affiliated with the discordant dimension, and this affiliation reflects the aggressive personality's tendency to inflict harm or cause strife in order to meet personal needs. The antisocial and histrionic scales are not discordant, but both will assert themselves via manipulation and social acumen or emotional reasoning and self-assertion, respectively, to

achieve their ends. The histrionic personality, while assertive, does not actively attempt to dominate or harm others, and thus is weakly related to the aggressive scale with an observed correlation of .11.

The compulsive personality style is rule-bound, ordered, and sometimes cognitively inflexible. It is unsurprising that the compulsive personality style produced negative correlations of -.40, -.33, and -.11 with the aggressive, antisocial, and histrionic personality styles, respectively. The significant positive relationships between the compulsive personality style and the schizoid, avoidant, and depressive styles is more difficult to explain. The observed correlations of .21, .25, and .17, respectively, may represent the perception of interpersonal deficits; the compulsive's rule-bound nature could be construed as a coping mechanism for a lack of flexibility in interpersonal skills. The schizoid and avoidant's distancing can be seen as circumventing situations for which the person feels socially unprepared. The depressive style, as defined by Millon (1994), could be seen as having given up due to an inefficient method of gaining reinforcement from the interpersonal arena.

The passive-aggressive personality is seen as moody, verbally aggressive, pessimistic, and brooding. These individuals are known to sulk over real or imagined slights or problems and catastrophize the outcomes of those problems. It is not surprising that this personality style produced negative correlations of -.16 and -.18 with the depressive and dependent personality styles, respectively, in that the passive-aggressive style is not actually passive at all. Such individuals are willing to express personal perceptions and negative emotions in an indirect manner that allows them a form of deniability should their actions be called to question. The passive-aggressive personality style produced a positive correlation of .23 with the schizoid personality style. This appears to be somewhat incongruent on the surface, but both styles are

characterized by a form on independent behavior and a rather narrow band of social and coping skills. The narcissistic, antisocial, and aggressive personality patterns produced correlations of .28, .17, and .20, respectively, with the passive-aggressive personality; this may indicate that the passive-aggressive style's view of the importance of self over others and the primacy of meeting one's needs is similar to that of the narcissistic, antisocial, and aggressive personality styles.

The self-defeating personality is characterized by submissive and self-effacing behavior, even when out of context. They are conforming, they place themselves in an inferior position in relationships, and, unlike the dependent personality, do not expect others to meet their needs. It was not unexpected to find that the self-defeating style was related to the avoidant and dependent personalities with correlations of .18 and .17, respectively. These individuals believe the rules do not apply to them, but in a manner where they cannot take advantage of the system as opposed to exploiting it; in essence, they feel they are outside of the protections of the system and are weak and vulnerable. They also likely view others as manipulative and exploitative. These perception are somewhat similar to that of the antisocial, and the observed correlation between these scales of .19 is relatively strong, but not unexpected.

The schizotypal, paranoid, and borderline personality patterns are considered to be pathological in any degree. (Millon,1999). They are similar in that they all represent some degree of disrupted interpersonal functioning, and they are characterized by disrupted affect, poor coping strategies, and altered perceptions regarding common interpersonal and environmental events. The paranoid personality style was significantly correlated to the schizotypal style, and the observed correlation of .38 may reflect the misinterpretation of common events and cognitive rigidity of both patterns. The borderline personality is uncorrelated with the other two severe patterns, probably because borderline personalities are

primarily characterized by negative affectivity, poor sense of self, labile emotional states, and a cycling between fierce independence one moment and smothering dependent behavior the next.

The correlations observed between the MCMI-III scales follow the expected pattern, especially considering the theoretical and psychometric similarity between specific scales (see above). These correlations provide a foundation for interpreting the formal results of the hypotheses tested in the current study, and they establish a framework for the expected relationships between personality styles. These results also highlight the multifaceted nature of human personality, and it is not unusual for an individual to produce more than one scale elevation on the MCMI-III. Psychological reactance, as a characterological construct, also demonstrated significant correlations with MCMI-III scales, and the MCMI-III intercorrelations provide assistance in explaining apparent inconsistencies between correlations and formal results, and also assist in interpreting the results from formal hypothesis testing.

Psychological reactance, as measured by the TRST, produced significant correlations with seven MCMI-III scales. The depressive and dependent personality styles demonstrated negative correlations with TRST scores,  $-.14$  and  $-.16$ , respectively. Reactant behavior is often characterized as demanding and insistent; these characteristics are absent from the depressive and dependent personality patterns. These relationships were predicted in formal hypothesis testing, but these correlations are mild and, as discussed in detail below, the formal results did not rise to match hypothesized predictions.

The passive-aggressive and schizotypal personality patterns both demonstrated a mild, statistically significant correlation ( $.11$  for both) with TRST scores. Given the mild nature of these relationships, only the most general speculation as to meaning is warranted. Reactance and passive-aggressive behavior both share characteristics of being control-oriented, and this



correlation likely reflects that orientation. Schizotypal behavior, on the other hand, is socially disjoined and often seen by others as strange and different; such an appraisal likely encourages the schizotypal person to isolate himself or herself. Individuals high in psychological reactance are characterized as socially independent and less concerned with the opinions of others; this behavior may be similar to the social disconnection of the schizotypal person.

The narcissistic and the aggressive personality patterns demonstrated significant correlations of .14 and .22, respectively, with psychological reactance. Both patterns reflect a desire for control over their environment and a perception of the self as strong, capable, and deserving of rewards. Additionally, highly reactant individuals are thought to be verbally aggressive and possibly even physically assaultive, much like the aggressive personality pattern. These theoretical similarities provide strong support for the observed correlation between the aggressive scale and the TRST.

Paranoid behavior, as measured by the MCMI-III, is characterized by a rigid outlook and cognitive style, a wary vigilance and distrust of others, and a sensitivity to insult or slight. These behaviors have been found to be characteristic of psychological reactance as well, and the observed correlation of .19 may even be somewhat weaker than expected.

#### *Discussion of the Formal Hypotheses*

Hypotheses one and two were formulated to test predictions that arose from prior research and the potential differences between a sample of medium security inmates and a college student sample. Testing the hypothesized differences between African-Americans and Caucasians and college students and inmates serves not only to test the generality of psychological reactance theory, but to also to test the conclusions from prior research that reactance is a characterological trait. Hypotheses three through eight are based on a modified

version of Huck's (1998) theoretical grounding of psychological reactance in Millon's (1994, 1997, 1999) typology of personality style. Huck (1998) approached the question of personality with respect to Millon's (1994, 1997, 1999) theory from a perspective of normal personality development. This theory, with support from the literature outlined in Chapter 1, is one of normal personality styles that, in their extremes, become pathological. The general focus of Huck's (1998) work was the theoretical structure of psychological reactance and not whether or not reactance was a pathological characteristic. The current study takes the same approach, but with the recognition noted earlier that three of the personality types measured by the MCMI-III are pathological in and of themselves and do not exist in any normal quantity. As such, someone cannot be a little bit borderline, for example. Huck (1998) isolated the polar components of the various personality styles and used these elements as the basis of theoretical predictions. The current hypotheses were based on the personality styles themselves, with both the exhibited behaviors and attitudes of those patterns and the theoretical structure taken into consideration.

Hypotheses 9 and 10 predict personality scale elevations based on level of psychological reactance; reactance is categorized into a discrete variable with three levels, high, moderate, and low. Individuals in one category, such as high reactance, are predicted to demonstrate a significantly higher level of a given personality style, such as aggressive, or lower level of a given personality style, such as dependent, than individuals in another reactance category.

#### *Hypothesis 1*

The first hypothesis tested the prediction that the mean level of TRST scores in an inmate sample would be significantly higher than those obtained from a sample of college students. Contrary to the formal prediction, there was no significant difference between the mean reactance scores of an archive sample of college students and the current sample of inmates. In

fact, the current sample demonstrated a slightly lower mean reactance score. This indicates that psychological reactance is likely evenly distributed across individuals similar to either (or both) of these samples, and that membership in either group is not sufficient to predict a higher (or lower) level of psychological reactance. While these results fail to support hypothesis 1, they do lend additional support for the characterological nature of psychological reactance as a personality variable present, and probably equally distributed, in all people.

Another possible explanation for these findings is that inmates, after being processed through the criminal justice system, have learned to control the tendency to display reactant behavior. An individual who has received a prison sentence for acting out is likely, at least in the short term, to suppress his or her acting out behavior, and possibly will not admit to attitudes or beliefs that support behavior that has resulted in negative consequences. Inmates may be, as a group, more reactant than college students, but inmates also have greater incentive to conceal their reactant tendencies within a correctional setting.

### *Hypothesis 2*

The second hypothesis tested the prediction that, consistent with past research, African-Americans would demonstrate statistically significantly higher TRST scores than Caucasians, but that the observed difference would not be clinically or operationally significant. This hypothesis was not supported as stated, and the observed scores for African-American and Caucasian inmates were in fact less than a point different. Results obtained by Seemann, et al. (under review), were possibly due only to the size of the sample used in their study, and the authors outlined this possibility. These authors also conducted a power test that attributed less than .01% of the observed effect to the difference between African-Americans and Caucasians, and they also noted that the real difference was likely not clinically significant. The results of

this hypothesis support the supposition that there is no clinical difference between these groups, and the failure to duplicate those results here indicates that there is no statistical difference as well, at least with respect to the current sample. While not supported as stated, this hypothesis found support, after a fashion, with the observed results. The prediction of a significant difference also qualified those results as being not clinically or operationally significant. According to this hypothesis a statistical artifact was expected which did not occur, but was also predicted that there is not an appreciable difference between Caucasians and African-Americans in terms of psychological reactance, and the nonsignificant results support this supposition.

### *Hypothesis 3*

The third hypothesis tested the prediction that avoidant, depressive, and self-defeating personality styles should predict significantly lower levels of psychological reactance. None of these scales were retained in the final regression solution, and this hypothesis was not supported. The avoidant and self-defeating personality styles did not generate significant correlations with participants' TRST scores, and the depressive personality style produced a slight negative correlation.

As the regression analysis and correlation matrix indicate, avoidant and self-defeating behavior patterns, clinical or normal, were not related to psychological reactance in the current sample. The depressive personality, however, had a significant negative relationship with TRST scores, indicating a global tendency for somewhat lower depressive personality scale scores when TRST scores are high. This relationship is not predictive, however, because the final beta weight generated in the regression analysis for the depressive personality style is  $-.053$ .

The depressive personality scale shares an inverse relationship with the paranoid personality scale. The depressive personality correlates  $-.18$  with the paranoid scale, and the

paranoid scale was retained as a significant predictor in the regression solution (discussed below). It is likely that the depressive and paranoid scales control a similar quantity of the variance associated with psychological reactance scores, and the unshared or unique contribution of the depressive scale simply was not significant in magnitude, and as such the scale was not retained as a significant predictor.

This shared variance between the paranoid scale and the depressive scale seems theoretically as well as statistically feasible. Depressive behavior is characterized as submissive and inactive. A person who exhibits prominent depressive personality features has essentially stopped responding to reinforcement or punishment, and he or she simply has accepted his or her fate. There is an underlying belief that characterizes the depressive personality outlook in its extreme, namely that there is nothing one can do to avoid harm, thus the person has ceased trying (Millon, 1999). The paranoid person, by contrast, is active and vigilant. This person continues to try to control or at least be wary of threats from the environment. Such a person tended to be higher in reactance because they are still preparing to meet and challenge perceived threats to personal freedom, even if those threats are more a matter of perception than reality. These similar proportions of the TRST variance are probably controlled more by the paranoid personality than the depressive, and so the depressive personality is eliminated from the final regression solution. Despite these speculations, this hypothesis did not generate the expected results, and, as such, was not supported.

#### *Hypothesis 4*

The fourth hypothesis predicted that the dependent and histrionic personality styles should predict significantly lower levels of psychological reactance. Neither of these personality styles were retained in the final regression solution, and this hypothesis was not supported. The

histrionic personality style did not generate a significant correlation with participants' TRST scores, and the dependent personality style produced a mild significant negative correlation. As such, the histrionic personality style appears to be unrelated to psychological reactance in the current sample.

The dependent personality pattern, however, had a mildly significant negative relationship with TRST scores, indicating a global tendency for somewhat lower dependent personality scale scores when TRST scores are high. This relationship was not predictive, however, because the final beta weight generated in the regression analysis for the depressive personality style is  $-.054$ , and thus was not a significant predictor.

The histrionic personality style was significantly correlated with the three predictors that were retained in the final regression solution (discussed below). The histrionic pattern demonstrated a small but significant correlation with both the aggressive and the borderline personality styles, and a mildly significant negative correlation with the paranoid personality style. As noted above, the histrionic personality style is characterized by emotional expressiveness, among other characteristics. The aggressive and the borderline styles are also emotionally demonstrative, but the quality of that expression is somewhat different. The histrionic personality pattern, as measured by the MCMI-III, is actually correlated with measures of mental health, according to Strack (1999), whereas the borderline personality is typified by its unhealthy emotional expression and lability. The histrionic personality style is also characterized by its expression of a full range of feelings, some of which are magnified or intense at times. The aggressive personality tends to express a restricted range of emotions, usually negative, such as anger, aggression, and spite.

In contrast to the expressive nature of the histrionic personality, the paranoid personality is emotionally rigid and restrictive. The histrionic personality is not at all constraining, and persons with a prominent histrionic personality are often judged to have poor discretion with respect to displays of a range of emotions. The paranoid personality has a negative relationship with the histrionic personality, perhaps with this difference at its core. It is plausible that the variance controlled by the histrionic style is better accounted for by these three predictors. Consequently, the histrionic personality style was excluded from the final regression solution.

#### *Hypothesis 5*

The fifth hypothesis predicted that the aggressive and the antisocial personalities should entail significantly higher levels of psychological reactance. The antisocial personality scale was not retained in the final regression solution, but the aggressive scale emerged as a significant predictor of psychological reactance and was retained in the regression; based on these results, this hypothesis was partially supported.

Surprisingly, the antisocial scale did not produce a significant correlation with TRST scores, but it demonstrated the expected correlation with the aggressive scale. The aggressive scale demonstrated a moderate correlation with TRST scores. Theoretically, the chief difference between the antisocial and the aggressive scales is their orientation to the avoidance of pain and the acquisition of pleasure. Both are active personality styles, both are weakly affiliated with self, and both are at least moderately affiliated with other. The antisocial personality style is the active-independent pattern that is characterized by proactivity and a tendency to follow one's own direction as opposed to looking to others for support and guidance.

The aggressive and antisocial patterns are similar in their affiliation with activity and independence, but the aggressive personality is also a discordant pattern and, unlike the

antisocial, expresses its pain/pleasure dichotomy outwardly by inflicting pain (or causing chaos, etc.) and denying others pleasure. By this mechanism the discordant type gains pleasure and avoids discomfort (pain). The aggressive and antisocial patterns were strongly correlated with each other. The relationship, based on theoretical formulation and observed behavior, is clear, with the chief difference being the approach to the pain/pleasure question. The antisocial is generally disregarding of others, and is fiercely independent. This personality characteristic is not necessarily predicted from the active-independent elements in isolation, but is rather a gestalt produced by the pattern as a whole. As such, the antisocial pattern measured by the MCMI-III may not be predictive of psychological reactance because it does not perceive others, specifically, as a threat to personal freedoms, but rather as a resource. This pattern is not tied to this resource, however, and the loss of one relationship may be seen as easily replaced or inconsequential; this behavior is not unexpected for an active-independent pattern.

The aggressive pattern, on the other hand, is more closely tied to others as a resource; discordance in isolation may produce an intolerable sense of frustration. This pattern relies on inflicting pain (or discomfort) and denying pleasure while avoiding others' attempts to restrict the aggressive person from doing so. As such, the combination of an active-independent orientation and a discordant outlook is predictive of reactance. This interpretation has some support from past research; Seemann, et al. (under review) observed that agreeableness, as measured by the NEO-PI-R (Costa & McCrae, 1992) was inversely related to psychological reactance and was a strong predictor of TRST scores. Low levels of agreeableness have been related to oppositional behavior and physical acting out.



*Hypothesis 6*

Hypothesis 6 predicted that the schizotypal personality would predict significantly lower levels of psychological reactance; this prediction was shared by Huck (1998), who based this prediction on the schizotypal personality's clinical presentation as it related to the typical description of a highly reactant person's behavior. The current study viewed the schizotypal pattern as an amalgam of the elements of Millon's (1994, 1997, 1999) theory of personality as well as the description of the severe personality patterns as being distinct from the other 11 personality styles postulated in his theory. The severe personality patterns, of which the schizotypal pattern is one, are seen as decompensated versions of the 11 patterns that make up Millon's biaxial model. While not necessarily indicative of a personality disorder, they are maladaptive. The current study examined the schizotypal's theoretical affiliation with the active-passive, dependent-independent, and pain/pleasure elements of Millon's (1994, 1997, 1999) theory. Because the schizotypal personality is weakly affiliated with active, passive, dependant, and independent polarities, and because this pattern has little investment in the pain/pleasure dichotomy, the current study predicted low levels of reactance. The results indicate, however, that the schizotypal personality did not emerge as a significant predictor of psychological reactance and was not retained in the final regression solution.

In retrospect, the prediction of an inverse relationship with psychological reactance was based on an assumption of high scores as *reactant* and low scores as *not reactant*; this bipolar assumption failed to take into account the middle ground, and assumed that anything not related to high reactance, and not specifically predictive of low reactance, would also predict low reactance by default. The absence of predispositions to act out to defend personal freedoms is not necessarily indicative of low levels of psychological reactance, and this result adds greater

specificity to the nature of reactant behavior. Low levels of psychological reactance are more than just *not reactant*, and there are likely specific low-reactance predictors, just as the current study and the prior research has assumed and sought out specific *high reactance* predictors and correlates.

Regarding theory, the observed behavior of the schizotypal person is likely not sufficiently ordered to engage in systematic, purposeful behavior such as low- or high reactance functioning. Clinically, those diagnosed with a schizotypal personality exhibit some signs of psychosis or psychotic-like behavior, and are at risk for developing a significant major mental illness. Because this personality pattern is characterized by instability and social isolation, the current results are understandable. While these results expand the theoretical and conceptual basis of psychological reactance, they do not support this hypothesis.

#### *Hypothesis 7*

The seventh Hypothesis predicted that the borderline personality would predict significantly higher levels of psychological reactance; this prediction was shared by Huck (1998), who based his speculation on the borderline personality's clinical presentation as it related to the typical description of a highly reactant person's behavior. As with the schizotypal, the borderline personality pattern is considered a decompensated version of one of the 11 core personality styles. The prediction regarding psychological reactance and the borderline personality in the current study was based on the theoretical underpinnings of the borderline. This personality style, as noted in Chapter 1, is average on all of the polarities, but each is disrupted. The borderline personality seeks both pleasure and pain, is both active and passive, and seeks dependence while attempting to assert independence. This pattern is control-oriented due to the constant state of chaos the borderline is in. The borderline personality was retained in

the final regression solution as a positive predictor of psychological reactance, and this hypothesis was supported.

It is interesting to note that the borderline personality is generally discordant, to the point of experiencing constant disruptions in life. The aggressive personality, on the other hand, is also a discordant pattern, but in a different manner. The aggressive pattern, which can exist in normal levels, according to theory, is systematic and goal-directed, lacking the unpredictability and chaotic behavior of the borderline. Both patterns are predictive of psychological reactance, and they correlate moderately with each other. For the current sample of inmates, it appears that the discordant pattern is strongly related to psychological reactance if at least a moderate affiliation with the active and independent polarities is present. The results from this hypothesis also imply that the presence of a moderate affiliation with the dependent and passive polarities do not alter the association of the discordant active and independent polarities with higher levels of psychological reactance. The passive-aggressive pattern, which was neither correlated with reactance nor a significant predictor in the final regression solution, is a passive-discordant pattern. Taken with the results from hypotheses 6 and 7, it can be inferred that a discordant passive affiliation is not related to reactance, and that for a personality pattern to be predictive of psychological reactance in the current sample, the discordant, active, and passive polarities should be present.

#### *Hypothesis 8*

The eighth hypothesis predicted that the paranoid personality would predict significantly higher levels of psychological reactance; this prediction was shared by Huck (1998). He based his speculation on the paranoid personality's clinical presentation as it related to the typical description of a highly reactant person's behavior. The paranoid personality is characterized by a

control orientation, vigilance, limited social functioning, and a profound sensitivity to insult. As noted in Chapter 1, the highly reactant individual is also characterized by similar traits.

Theoretically, the paranoid personality is characterized by a weak affiliation with all polarities. This affiliation is also disrupted, but not in a discordant manner. The polar ends of the active/passive, dependent/independent, and self/other dichotomies are split. In essence, each pole acts as a single distinct entity, and not as opposing parts of the same whole. This configuration is unique in comparison to the other personality styles, normal and severe. In the case of the paranoid personality, theory serves as a poor guide to predicting this pattern's relationship with psychological reactance, so the clinical profile will be used to interpret the results from this hypothesis.

The paranoid pattern was retained in the final regression solution, and it emerged as a significant predictor of psychological reactance. This result indicates that, for the current sample of medium-security inmates, behaviors characteristic of the paranoid personality are also characteristic of the highly reactant individual. It is interesting that the paranoid personality style is strongly correlated with the schizotypal and narcissistic personality styles; neither of these patterns were retained in the final regression solution. Each is seemingly very different from the paranoid personality. These relationships may aid in interpreting the relationship between psychological reactance and the paranoid pattern.

The narcissistic personality is characterized in Millon's (1997,1999) theory as being passive-independent. Such a person desires attention but does not want to be dominated or controlled by others; in fact, the narcissistic personality seeks adoration, which requires little effort (passive) and places the narcissistic person in a position of power or control (independent). The paranoid personality also seeks freedom from the influence of others, but also wishes to

remain unmolested. Attention is negatively interpreted by the paranoid person and, as a severe pattern, social interactions are likely to be misconstrued as threatening or manipulative, even those from individuals who seek to praise or adore the paranoid individual. The similarity lies in the need for independence. It is likely that this shared variance is reflected in the correlation between the paranoid and the narcissistic personalities, but the unique variance from the narcissistic personality that remains after the paranoid personality is retained as a predictor has insufficient predictive power to warrant the retention of the narcissistic personality as well. It is likely that the need for freedom, a desire expressed with vigor and rigidity by the paranoid personality, is perhaps a large part of what the paranoid pattern and psychological reactance have in common.

The schizotypal personality is characterized by an avoidance of others, much like the paranoid. This avoidance is likely distorted or extreme as the schizotypal personality is also a severe personality pattern. The schizotypal, however, is unfocused, scattered, insensitive to the remarks of others, and characterized by chaotic behavior as opposed to personal rigidity. The paranoid personality is rigid, vigilant, and sensitive to insult. The schizotypal tends to act in an odd manner, as if social cues are unheeded. The paranoid, on the other hand, is acutely aware of social behavior, and is ready to apply its own interpretation to every contact. The schizotypal person can also be characterized as responding to internal stimuli, much in the same way someone with a psychotic disorder may behave. The paranoid, on the other hand, has a decidedly external focus, and is always on guard. While the avoidance behavior is similar, the schizotypal and the paranoid control similar variance from opposite positions (vigilance versus inattentiveness, sensitivity to social interactions versus a disregard for external stimuli, and so forth). As noted above, the opposite poles of behaviors predictive of psychological reactance

may not be predictive of lower levels of reactance. This is likely the case here. The paranoid personality controls the unique variance that is predictive of reactance, whereas the schizotypal personality does not, even though they have the avoidance aspect in common.

#### *Hypothesis 9*

The ninth hypothesis predicted that individuals with high levels of psychological reactance (defined as one SD or more above the sample mean) should demonstrate significantly higher levels of the compulsive, passive-aggressive, sadistic, antisocial, and narcissistic personality styles than individuals with moderate or low levels of psychological reactance. These personality styles should demonstrate a statistically significant positive relationship with TRST scores.

The results provide strong support for this hypothesis; three of the five scales named in this hypothesis (antisocial, passive-aggressive, and aggressive [sadistic]) demonstrated results in the predicted direction. The narcissistic scale demonstrated the expected results only with respect to high versus low levels of psychological reactance, and the compulsive scale demonstrated significant results in the opposite direction than those predicted by hypothesis 9.

According to the results, psychological reactance levels are predictive of extreme scores in the aggressive, antisocial, and passive-aggressive personality styles. As noted above, these personality styles have several behaviors in common with features unique or specific to the given style. All demonstrate manipulative behavior, but the aggressive personality pattern is more likely to be assaultive or physically intimidating. The antisocial personality may use physical force, but is more likely to use social persuasion and non-physical interpersonal manipulation, such as lying or other forms of deception. Individuals with passive-aggressive styles are less likely to use violence, but are more likely to manipulate using guilt and their own

negative emotions, incurring a sense of responsibility in others. Highly reactant individuals can be characterized as controlling and independent. The aggressive and antisocial personality patterns are fiercely independent, and attempt to control others in their surround to gain their own ends either by force or threat (aggressive) or via deception and social manipulation (antisocial). The antisocial and the aggressive personality both seek to use others to meet their own ends while correspondingly attempting to avoid being under the control of others. This includes not only direct control by individuals, but that imposed by social norms, mores, and formal legal statutes. The passive-aggressive personality is less concerned with independence and more concerned with control. They may use negative mood outbursts to control others, and then demonstrate congenial behavior when they have achieved their goals. This behavior can resemble a shaping paradigm where the undesired actions of others are punished with negative mood and the favored actions are rewarded with positive affect (and relief from the torrent of negative emotionality).

Individuals high in psychological reactance, as noted in the literature review in Chapter 1, tend to value individual freedom and personal control. They also value freedom from the control of others, and will act out if they feel their individual free behaviors are being overly restricted. These results indicate that highly reactant individuals may use a variety of behaviors, such as aggression, social manipulation, and deception, to achieve their goals. As noted in Table 6, the mean levels of the antisocial, aggressive, and passive-aggressive personality scales are normative when psychological reactance is moderate. When psychological reactance levels are high, the mean antisocial and passive-aggressive scale scores are above 75, indicating the presence of extreme traits and behaviors characteristic of these personality styles. The aggressive scale mean is 71.6 with a standard deviation of 13.36 when psychological reactance is high,

indicating that slightly less than half of those with a high level of psychological reactance demonstrate the extreme traits characteristic of the aggressive personality style.

The narcissistic scale demonstrated statistically significant differences between mean scores when psychological reactance was high versus low, but the actual difference was less than eight points (see Table 6). The mean elevation of the narcissistic scale when psychological reactance was low, moderate, and high all fell within the normative range for this scale. While these results partially support hypothesis 9 on their face, they actually speak against the spirit of the predictions made here. While there is a statistical difference between the narcissistic scale scores with respect to high and low psychological reactance, the elevations produced by those mean scores are not distinctive, and little useful information is provided. In essence, the narcissistic scale failed to support this hypothesis.

The compulsive scale demonstrated the most surprising results; high levels of psychological reactance was expected to relate to individuals who are rigid, rulebound, and inflexible. Here the limitations of the current sample, described in Chapter 3, come to bear. The mean compulsive scale score for the whole sample was below the base rate norm of 60 (47.83,  $SD = 14.97$ ). This mean, with its limited variability, greatly restricted the variability available in the current sample, and thus none of the compulsive scale means, with respect to psychological reactance level, were elevated beyond the norm. Mean scale scores for those with high or moderate levels of reactance were sub-normative, indicating a possible absence of the traits characteristic of the compulsive personality.

While the compulsive scale seems to be functionally unrelated to psychological reactance, there is another mitigating factor that may explain the confusing performance of the this scale. While its variability was severely limited, the general direction of the results for the



compulsive scale was surprising. It is possible that, as noted by Strack (1999), the compulsive scale is related to measures of mental health and is actually a poor measure of the compulsive personality style except in extreme elevations. The current sample is composed of medium-security inmates, and such individuals are less likely to demonstrate healthy emotional adjustment, further limiting the obtained scores.

While the results of the compulsive scale and the narcissistic scale were disappointing, the strong results returned by the antisocial, aggressive, and passive-aggressive scales support this hypothesis. Psychological reactance, in the current sample, appears to be positively related to these three personality style, and a high level of psychological reactance is predictive of a personality style characterized by aggressive, passive-aggressive, and/or antisocial traits and behaviors.

#### *Hypothesis 10*

The tenth hypothesis stated that psychological reactance should have a strong inverse relationship with the dependent, avoidant, and schizoid personality styles. Interestingly, this hypothesis was not supported, and the opposite results were observed. A priori comparisons indicated that each of these scales demonstrated higher mean scores when the level of psychological reactance was high and lower mean scores when the level of psychological reactance was low.

The dependent, avoidant, and schizoid personality scales all produced statistically higher mean scores when psychological reactance was high and lower mean scores when psychological reactance was low, indicating positive statistical relationship. While these findings may appear to support the opposite of the predictions made in hypothesis 10, an examination of the actual

mean scores involved (detailed in Table 7) reveals these results to be more of a statistical artifact.

Similar to the compulsive scale noted above, the dependent scale demonstrated a subdued mean score (51.03, SD=21.70) and restricted variability. When psychological reactance was low, the mean dependent scale scores were approximately 24 points below the normative range, indicating a possible absence of dependent features when reactance is low. When reactance was moderate and high, the mean scores differed by less than three points, and they remained in the normative range, indicating no specific relationship between moderate or high levels of psychological reactance and the characteristics measured by the dependent personality scale. This is counterintuitive, and it may be a feature of the self-selecting population sampled in the current study. For the current study, and with respect to the sample of medium-security inmates, it is unlikely that the dependent scale has any clinically significant relationship with psychological reactance.

It is interesting that the dependent scale produced a mild statistically significant inverse correlation with TRST scores; this correlation is a trend in the direction predicted by hypothesis 10, but as a trend it was not supported by the current results. It is possible that the categorization of psychological reactance into three groups (low, moderate, and high) unduly restricted the notably limited variability in the dependent personality scale, thus obfuscating any usable results.

The schizoid scale demonstrated statistically significant differences in a linear manner between mean schizoid scale scores when reactance level was high, moderate, and low. These results indicate a statistically significant positive relationship between psychological reactance and the schizoid personality scale, but this relationship is illusory. The difference between mean

schizoid personality scale scores when psychological reactance is high versus low is less than five points, and both means are within the normative range. The difference between mean scores when psychological reactance is high versus low is approximately 17 points, but the mean schizoid scale score when reactance is low is at the lower end of the normative range. These results indicate some movement within the normative range based on psychological reactance level, but that movement becomes extremely limited when reactance is moderate or higher, and the means produced fall within a range that is indicative of normal levels of schizoid personality functioning. In essence, the schizoid personality pattern appears to be unrelated to psychological reactance, and reactance is a poor predictor of schizoid scale scores. This is not completely surprising as the schizoid scale failed to produce a significant correlation with TRST scores.

The avoidant scale also failed to produce a significant elevation beyond the normative range, but the mean avoidant scale score for low level psychological reactance was decidedly sub-clinical, indicating the possible absence of avoidant features when psychological reactance is low. The predictive power of the level of psychological reactance weakens as reactance level increases; moderate levels of psychological reactance are generally predictive of moderate scores on the avoidant scale, but higher levels of reactance are also associated with a slightly higher normative mean avoidant scale score. The difference between avoidant scale scores when reactance is moderate versus high is less than seven points, and mean avoidant scale score when psychological reactance is high is still approximately 10 points below the level needed for a significant elevation.

The avoidant scale failed to produce a significant correlation with TRST scores, and the predictive utility is possibly illusory given the unipolar nature of the relationship described above. While these results are restricted to the current sample of inmates, the avoidant scale

appears to have little relationship with psychological reactance. The relationship that appears to exist is a statistical artifact that stems from segmenting psychological reactance into three discrete categories (high, moderate, low). The avoidant scale was also not retained in the final regression solution, further indicating that no significant relationship exists. This hypothesis was not supported.

### *General Discussion*

The most significant finding is that personality style, as measured by the MCMI-III, accounts for a significant portion of the variance in psychological reactance scores in the current sample. Results of the stepwise regression analysis indicate that 31.1% of the variance in psychological reactance scores can be attributed to personality styles as measured by the MCMI-III, and that future studies using a similar design and population are expected to find that roughly 30% of the variance in TRST scores is attributable to personality style.

Personality style accounts for a large part of the TRST score variance observed in the current sample, adding further support for the conceptualization of psychological reactance as a characterological trait. These results are comparable to prior studies involving personality and psychological reactance, (Buboltz, et al., 1999; Buboltz, et al., in press; Dowd & Wallbrown, 1993; Dowd, et al., 1994, Huck, 1998; Seemann, et al., under review, Seemann, et al., 2001). The prior research has largely investigated the relationship between psychological reactance and personality using trait-factor models of personality, such as Seemann, et al.'s study using the NEO-PI-R (under review) and Dowd, et al.'s (1994) work with the California Personality Inventory. The current study is one of two that used a measure of personality style, as opposed to trait, to expand the nomological net of psychological reactance. The results obtained here further add to the description of the highly reactance individual and, when taken with prior research on

personality traits and psychological reactance, also provide reactance researchers with directions for future studies (noted below).

The current study confirmed the descriptions of the highly reactant individual as vigilant, untrusting, wary, aggressive, socially manipulative and/or unskilled, hostile, confrontational, emotionally expressive, rigid, moody, domineering in interpersonal relationships, nonconforming, territorial, and impulsive. These traits, which were identified in past college student samples, have appeared in the current sample of medium-security inmates, indicating the generality of the psychological reactance construct to this new population. The generality of reactance is further supported by the results of hypothesis 1, which indicated that no significant difference was present between the mean reactance scores of an archive sample of college students and the current sample of medium-security male inmates.

In terms of testing a modified version of Huck's (1998) theoretical grounding of psychological reactance, the results of the current study tended to support the notion of a specific personality style that was indicative of psychological reactance, as opposed to specific polar affiliations (such as active/passive or independent/dependent, etc.) that were related to higher reactance scores. An affiliation with the dependent polarity, for example, was observed to be generally inversely related to psychological reactance, but this interpretation is based entirely on the results of the correlational analysis; no dependent pattern was retained in the final regression solution. Additionally, there is no evidence indicating that a dependent affiliation (or a passive affiliation) was related to lower reactance scores. While active patterns demonstrated significant correlations with psychological reactance, only the aggressive personality was retained in the stepwise regression analysis, and an examination of the aggressive pattern along with the other

significant predictors retained in the final regression solution lends a degree of support for a theory of personality style with respect to psychological reactance.

The aggressive personality is the active/discordant pattern, and as noted above, it appears that the combination of an active pattern and a discordant orientation are sufficient and necessary to predict higher levels of psychological reactance. The borderline personality, which is moderately affiliated with the active polarity (as opposed to strongly affiliated like the aggressive pattern) is also characterized by a discordant orientation. It seems that the active affiliation must be at least moderate, and that the discordant orientation to the pleasure-pain dichotomy must be present as well. It would also appear that the strength of the active affiliation is directly related to the predicative power of the personality style in terms of psychological reactance, as long as the discordant orientation is also present. In the results from the current sample, this is evidenced by the weaker beta weight generated by the borderline scale. Other personality styles, such as the passive-aggressive, that weakly affiliated with the active polarity are not predictive of psychological reactance, even if the discordant dimension is present. With respect to the current sample, these results indicate that the active/discordant personality style is specifically predictive of psychological reactance.

Psychological reactance, in turn, was found to be generally predictive of scale elevations in the antisocial, aggressive, and passive-aggressive scales in the current sample. The behaviors characteristic of the highly reactant individual described above and in Chapter 1 are sufficiently distinct to discriminate between personality patterns; a highly reactant person in the current sample is not characterized by dependent or compulsive scale elevations because of the behaviors and attitudes typical of such a person. The description of the highly reactant person from prior research has demonstrated its utility in predicting personality styles that also reflect

similar behaviors, according to the current results. This finding is more important than simply establishing a bidirectional relationship between psychological reactance and personality style; these results indicate that psychological reactance, a relatively specific phenomenon, can provide useful inferential information about an individual's general personality style, a much broader construct with wider implications regarding the behavioral tendencies and cognitive style of the reactant individual. While these results are limited to individuals similar to the inmates in the current sample, there is adequate evidence to suggest that the predictive relationship would be a general one after sufficient study with other populations, such as college students. College student research has been demonstrated to be general to the inmates that comprise the current sample, as evidenced above, therefore, it is not unreasonable to cautiously predict that a broad finding such as this is general to college students and other groups.

An unexpected finding arose from testing the formal hypotheses that dealt with predicting personality scale elevations based on psychological reactance level. Psychological reactance level did not differentially predict higher or lower levels of hypothetically opposing personality constructs, such as the antisocial versus the dependent personality styles (active/independent versus passive/dependent). Additionally, personality scales that were predicted to have inverse relationships with psychological reactance level (high, moderate, and low) demonstrated the exact opposite relationships. As noted above, the avoidant scale was low when psychological reactance was low, and mean scores were elevated (but not into the range of clinical significance) when psychological reactance was high. Moreover, scales such as the narcissistic scale, the dependent scale, the schizoid scale, and the avoidant scale did not demonstrate the clear relationship predicted across levels of psychological reactance. If these results are combined with the spectacular failure of the personality scales in hypotheses 3, 4, and

6 to predict significantly lower levels of reactance, it becomes clear that psychological reactance may not be a conceptually linear construct.

As noted in the discussion of hypothesis 6, low levels of psychological reactance may be due to factors other than the simple absence of the elements predictive of high levels of reactance. Psychological reactance as presented in the literature and in the current study as a bipolar construct, even though several past works (the current study included) measure psychological reactance on a continuum. Reactance is discussed in terms of high and low reactance, as if one is the opposing end of the other. This may well be, but reactance is best gauged on a continuum for several reasons, and the findings (or lack thereof) in the current study support the conceptualization of reactance as more than two or three categories.

The literature discussed in Chapter 1 has described the highly reactant individual in detail, and the current study has reinforced that description. Insufficient description exists of the low reactance and the moderate reactance person because of assumptions that low reactance was the opposite of high reactance and, therefore, was related to opposite sorts of constructs. The assumption that moderate reactance is a default category many may consider normative may be in error. It is possible that low levels of psychological reactance are related to their own specific traits, and those characteristics are distinct from those that are indicative of high levels of psychological reactance. Moderate levels of reactance, if such a category is truly evident, may indeed be related to a third set of variables distinct but related to those predictive of high and low levels of reactance.

Another explanation is that there could be more than one type of psychological reactance. Seemann, et al. (2000) suggest that more than one mode of reactant expression exists; the current results, those that support the formal hypotheses and those that do not, can be seen as supporting



this supposition. Psychological reactance was observed to be predictive of significant elevations in three personality styles in the current sample, namely the aggressive, antisocial, and passive-aggressive. While related, each has its own distinct and unique form of expression, and it is reasonable to assume that individuals who achieve high scores on the TRST all do not share significant elevations across these three scales.

The results of hypothesis 10, while disappointing in terms of the formal prediction, provide a hint of useful information. If the schizoid, avoidant, and dependent personality scales are indeed positively related to psychological reactance, and if psychological reactance level predicts moderate scores in these variables (as opposed to high or low scale elevations), then it is possible that a type of reactance exists that is indicative of a moderate personality style and is not predictive of the aggressive, borderline, and paranoid personalities. If schizoid, avoidant, and dependent personality scales, in a broader population sample that allows for greater within-scale variance, manage to demonstrate significant scale elevations based on psychological reactance level, then it is possible that a different reactant style exists, one that is characterized by traits related to those three scales and only conceptually related to the reactance described above.

An interesting finding regarding this study is that, for the current sample, psychological reactance appears to be related to odious and undesirable personality characteristics, some of which may be of characterological significance. Those with a normal level of an aggressive personality are likely not the abusive individuals characterized by a score elevation of 75 or more on the MCMI, but such individuals can be seen as pushy, insensitive, and rude. While such a characterization is considered normative, and it does not preclude the presence of other positive, socially desirable traits, it is an unfavorable characterization that would likely evoke a

negative evaluation in the average person hearing a description of the reactant individual's behavior and tendencies.

The other two personality patterns retained in the regression analysis are considered generally maladaptive and pathological in any extreme. The borderline personality, as it relates to psychological reactance, indicates that highly reactant individuals in the current sample suffer from maladaptive emotional regulation and deficits in the appropriate expression of negative affect. They vacillate between periods of fierce independence and smothering dependence, their relationships tend to be turbulent and emotionally exhausting for their partners, and their sense of self is lacking in depth and poorly defined. Paranoid individuals, with respect to psychological reactance, misconstrue normally benign social cues to indicate an impending threat to personal freedoms. They likely ruminate regarding what others will try to do to harm them or otherwise cause them ill, and this rumination likely leads to a self-fulfilling prophecy. The paranoid person is socially distant, hostile to others, and hypersensitive to insult, real or imagined. While there is insufficient evidence from the current study to suggest that highly reactant individuals in the current sample suffer from a diagnosable characterological disorder, there is evidence that strongly suggests the presence of maladaptive patterns of behavior, distorted interpersonal perceptions, and inefficient or deficient coping styles.

#### *Implications for Treatment*

The findings from the current study have significant implications for general therapy, psychological assessment, and mental health service delivery to incarcerated populations. The following section briefly discusses the implications for treatment raised by these results, specifically in terms of treating characterological problems and overcoming resistance in therapy. Understanding the shape of reactance in an incarcerated population can help guide

treatment planning and help the professional approach in-depth assessment. The outcome of treatment itself can be influenced and guided with respect to the current findings, especially when examining characterological or behavioral issues related to incarcerated clients.

As noted in Chapter 1, psychological reactance has been related to various theoretical and empirical constructs that describe therapeutic resistance. Reactance is similar to, but distinct from, therapeutic resistance in that resistance is motivated by many different factors, but reactance is ultimately driven by the goal of protecting a personal freedom from the (real or imagined) threat of loss. Reactant behavior is automatic, whereas resistance can be unconscious or goal-directed. Both constructs have the similar effect of negatively mitigating gains from therapy. When treating individuals similar to the current sample of inmates, assessing a client's level of psychological reactance can guide the treatment provider in determining the general shape of the client's resistant behavior. When a client's free behaviors are challenged, a specific reactant response may be seen. The free behaviors that may be at risk in therapy include cognitive distortions, inappropriate or criminal behavior (such as deviant sexual behavior, operant aggression, or passive-aggressive manipulations), an inappropriate or inaccurate self-concept, egocentric entitlement, and many others. An inmate-client who is not characterologically impaired may manifest reactant motivation as an attempt to physically threaten or intimidate the therapist, attempts to distort, alter, or otherwise impede the progress of therapy through social guile, or the reactant inmate may use bursts of pouting, complaining or other negative emotions to manipulate the therapist and alter the course of therapy.

The treatment of characterologically-disordered clients who are also highly reactant would require substantial modifications to the therapeutic environment, and likely require the deployment of a specific therapeutic strategy. A client with borderline or paranoid traits will

certainly present a variety of challenges to the treatment professional, and it is likely that a specialized format for treating such clients is necessary. While the nature of a characterological disturbance can be difficult to identify specifically, an elevated level of reactance informs the professional that this individual will present significant resistance and is constantly in danger of terminating therapy early. Such individuals also would not likely respond well to therapeutic confrontation, and rapport will have to be reestablished frequently.

It is well known that inmates are a difficult population to treat, and prisons are difficult environments in which to deliver mental health services, especially because the mental health mission can be seen as inconsistent with the mission of a correctional facility. A highly reactant inmate is likely having difficulty adjusting to the correctional setting, and may have a history of violent behavior within the institution. Treatment planning can be difficult, especially if the client requires more than a few sessions of brief therapy. Understanding client reactance will help the provider set realistic goals, and avoid the pitfalls of expecting too much change too early in the relationship. The therapist will also be alerted to the possibility of secondary gain as the chief, but hidden, motivation for seeking therapy on the part of the inmate. Treatment planning can focus on understanding reactant behavior and tendencies, and would likely include several behavior modification steps as goals. Social skills training and impulse control/anger management likely would be implicated for such clients.

If an inmate is determined to be highly reactant, the clinician would be wise to assess for characterological dysfunction, specifically the violent, emotional, and wary personality disorders and their traits. Knowing about client reactance can help the assessing professional expect resistance during the assessment, understand its form and shape, and then overcome or circumvent it. This is a potentially important procedure for court-ordered evaluations as well. In

these studies of an individual, the inmate is likely invested in presenting a certain clinical picture. Understanding client reactance can aid the clinical professional in ruling out malingering, exaggerated symptom presentation, and can also aid in interpreting resistance that may be hiding a genuine mental illness.

Mental health professionals in correctional settings would find the study of client reactance beneficial in the treatment of what many would see as typical inmate issues, such as depressed mood due to separation from family, anxiety from incarceration, and the ultimate question for most inmates of reintegration with society. Symptoms that resemble anxiety or depressed/irritable mood may actually be reactant behavior; the inmate tries to control his or her surroundings while attempting to restore the freedoms lost to incarceration. During the period of adjustment, this person will be very uncomfortable, and may be at risk for institutional violence or self-harm. An understanding of psychological reactance and how it relates to personality in incarcerated individuals would aid in directing the professional's therapeutic efforts. Instead of treating depression, for example, the real problem is dysphoric mood due to loss of behavioral freedoms. Therapy for depression may help the person show some gains, but addressing the issue of lost freedoms and facilitating adjustment may have even greater utility.

#### *Limitations of the Current Study*

Several limitations of the current study should be noted. In keeping with past precedent, regression analysis was used to determine the relationships between the scales of the MCMI-III and the TRST. While regression is a powerful statistical technique, potentially significant predictors may have been excluded simply due to the sheer number of variables present in the analysis. The variance available is limited, and when a potentially powerful predictor emerges

and partitions a large portion of the variance, other, less powerful predictors may be excluded simply due to the lack of available variance in subsequent iterations of the stepwise analysis.

Four MCMI-III scales demonstrated suppressed mean base rate scores; as noted above, these suppressed scores may have limited the available variance for the avoidant, dependent, histrionic, and compulsive scales in the current analysis, in effect causing a false negative result as they were excluded from the final regression solution. These suppressed mean scores and limited variance also likely influenced the results of hypothesis 10, sufficiently restricting the range of scores and the mean elevations available for comparison with respect to the different levels of psychological reactance.

Additionally, the personality styles retained in the current regression analysis indicate a more limited range of personality profiles than those from prior research, possibly because of the self-selecting nature of a medium-security inmate population. The security level of the inmates in the current sample may also have impacted the personality styles present; a medium security rating could imply a level of dangerousness or the presence of aggressive/violent tendencies not present in low or minimum security inmates.

The population sampled in this study was one of medium-security inmates from a facility in northern Louisiana, and the result of this study should be generalized to other inmate populations with caution. These results should be duplicated before generality is assumed with other populations, such as college students or civilian hospital inpatients. Inmates are a self-selecting population, and it stands to reason that the pool of available personality styles in the current sample was limited. This sample self-selected even further due to the failure of a number of participants to complete the study materials or to return valid MCMI-III profiles. It is likely that the inmates who failed to complete the instruments or those who returned invalid profiles

had some characteristic or other variable in common. Due to the nature of conducting research within a prison, it is possible that some external factors were present that were beyond the control of the researcher. These external conditions may have influenced the response styles of the inmates participating in the study.

The demographics of the current sample were not representative of the State of Louisiana or the general population of the United States of America. It is difficult to generalize these results to other populations until further studies are conducted.

#### *Suggestions for Future Research*

The current study focused on generalizing reactance research to an inmate population and on testing a theoretical model of psychological reactance that was originally used with a college student population. A future project should further investigate the current study's finding of no difference between inmates and college students, possibly focusing on the personality correlates of reactance and how different personality styles can shape similar levels of reactance in these groups.

The question of types of reactant behavior has again surfaced, and identifying and refining the proposed types of reactant behavior appears to be a logical step in expanding the nomological net of psychological reactance. Inmates and college students may have similar levels of reactance on the whole when reactance is measured as a broad construct, but there may be subtle or profound differences between the types of reactant behavior displayed by these groups.

Personality style clearly accounts for a significant portion of the variance in TRST scores in the current study, and this finding is important when taken with the past research on personality traits and psychological reactance. A follow-up study should be conducted that

includes both type and trait personality constructs, and the investigators should determine if these variables account for similar or distinct aspects of the variance present in psychological reactance scores.

Finally, the utility of psychological reactance could be greatly expanded by addressing behaviors that are commonly seen in inmates, parolees, and probationers that are of concern to their custodians. The question of the impact of psychological reactance and recidivism, compliance with the conditions of probation/parole, and inmate adjustment to a correctional institution all should be addressed and would likely yield results useful to the correctional and law enforcement professions.



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APPENDIX A

Institutional Review Board Approval Form





LOUISIANA TECH  
UNIVERSITY

148

RESEARCH & GRADUATE SCHOOL

MEMORANDUM

TO: ✓Walter C. Buboltz, Jr.  
Eric Seemann  
Anita Flye

FROM: Deby Hamm, Graduate School

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: June 22, 2000

In order to facilitate your project, an **EXPEDITED REVIEW** has been done for your proposed study entitled:

“Reactance, control and personality correlates of inmates”  
Proposal # 1-SY

The proposed study 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. Further, the subjects must be informed that their participation is voluntary.

*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.*

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 you have any questions, please give me a call at 257-2924.

A MEMBER OF THE UNIVERSITY OF LOUISIANA SYSTEM

P.O. BOX 7923 • RUSTON, LA 71272-0029 • TELEPHONE (318) 257-2924 • FAX (318) 257-4487 • email: research@LaTech.edu

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## APPENDIX B

### Informed Consent Form

## HUMAN SUBJECTS CONSENT FORM

### Group Format

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: Psychological Reactance and personality style in inmates.

PURPOSE: To examine the relationship between personality style and psychological reactance.

PROCEDURES: Completion of the survey packet

INSTRUMENTS: The Millon Clinical Multiaxial Inventory-III, the Therapeutic Reactance Scale, and a demographic data sheet.

RISKS/ALTERNATIVE TREATMENTS: None

BENEFITS/COMPENSATION: There will be no benefits or compensation for participants.

I attest with my signature on the attached page that I have read and understood the following description of the study, "Psychological Reactance and Personality Style in Inmates", 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 or my grades 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 results will be freely available to me upon my request. I understand that the results of my survey will be anonymous and 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 participation in this study.

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

Dr. Walter Buboltz, Jr.	257-4039
Eric A. Seemann, M.S.	257-3410

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

Dr. Mary Livingston	257-4315
Dr. Terry McConthy	257-2924

## APPENDIX C

### The Therapeutic Reactance Scale

### Personal Attitude Inventory

**Instructions:** Please answer each item by circling the appropriate letter on the answer sheet. Use the following categories to record your answer:

A = Not Like Me   B = A Little Like Me   C = Somewhat Like Me   D = Very Much Like Me

- |     |  |   |   |   |   |
|-----|--|---|---|---|---|
| 1.  | If I receive a lukewarm dish at a restaurant,<br>I make an attempt to let that be known.               | A | B | C | D |
| 2.  | I resent authority figures who try to<br>tell me what to do.   | A | B | C | D |
| 3.  | I find that I often have to question authority.  | A | B | C | D |
| 4.  | I enjoy seeing someone else do something<br>that neither of us are supposed to do.                     | A | B | C | D |
| 5.  | I have a strong desire to maintain<br>my personal freedom.   | A | B | C | D |
| 6.  | I enjoy playing "Devil's Advocate"<br>whenever I can.  | A | B | C | D |
| 7.  | In discussions I am easily persuaded by others.  | A | B | C | D |
| 8.  | Nothing turns me on as much as a good argument.  | A | B | C | D |
| 9.  | It would be better to have more<br>freedom to do what I want on the job.                               | A | B | C | D |
| 10. | If I am told what to do I do the opposite.   | A | B | C | D |
| 11. | I am sometimes afraid to disagree with others.   | A | B | C | D |
| 12. | It really bothers me when police<br>officers tell people what to do.                                   | A | B | C | D |
| 13. | It does not upset me to change my plans<br>because someone in the group<br>wants to do something else. | A | B | C | D |
| 14. | I don't mind other people telling me what to do.   | A | B | C | D |
| 15. | I enjoy debates with other people.   | A | B | C | D |
| 16. | If someone asks a favor of me, I will<br>think twice about what this<br>person is really after.        | A | B | C | D |

- |     |   |   |   |   |   |
|-----|---|---|---|---|---|
| 17. | I am not very tolerant of others' attempts to persuade me.                        | A | B | C | D |
| 18. | I often follow the suggestions of others.   | A | B | C | D |
| 19. | I am relatively opinionated.  | A | B | C | D |
| 20. | It is important to me to be in a powerful position relative to others.            | A | B | C | D |
| 21. | I am very open to solutions to my problems from others.                           | A | B | C | D |
| 22. | I enjoy "showing up" people who think they are right.                             | A | B | C | D |
| 23. | I consider myself more competitive than cooperative.                              | A | B | C | D |
| 22. | I don't mind doing something for someone even when I don't know why I'm doing it. | A | B | C | D |
| 23. | I usually go along with others' advice.   | A | B | C | D |
| 24. | I feel it is better to stand up for what I believe than to be silent.             | A | B | C | D |
| 25. | I am very stubborn and set in my ways.  | A | B | C | D |
| 26. | It is very important for me to get along well with the people I work with.        | A | B | C | D |

## APPENDIX D

### Demographic Data Sheet

## Demographic Data Form

Identification Number: \_\_\_\_\_ Gender (Circle one): Male Female

Race/Ethnicity (Circle One): African-American Asian/Asian American Caucasian  
Hispanic Native American Other

Age: \_\_\_\_\_ Years of Education: \_\_\_\_\_

Are you a Veteran of the U.S. Armed Forces? \_\_\_\_\_ If so, which service? \_\_\_\_\_

Current Marital/Relationship Status: Single Married Divorced  
Separated Living with a Partner  
Other (Specify): \_\_\_\_\_