Spring 2003

Psychological reactance as a personality characteristic: Relationships to attachment and autonomy

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PSYCHOLOGICAL REACTANCE AS A PERSONALITY CHARACTERISTIC: RELATIONSHIPS TO ATTACHMENT AND AUTONOMY

by

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A Dissertation Proposal Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

COLLEGE OF EDUCATION

LOUISIANA TECH UNIVERSITY

January, 2003

LOUISIANA TECH UNIVERSITY

THE GRADUATE SCHOOL

January 8, 2003
Date

We hereby recommend that the dissertation prepared under our supervision by Maurine Traville Hargrove Ladner, M.A., M.S.

entitled Psychological Reactance as a Personality Characteristic: Relationships to Attachment and Autonomy

be accepted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy

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GS Form 13
(1/00)

ABSTRACT

Psychological reactance is a construct that motivates people to restore lost or threatened freedoms (Brehm, 1966). Research has shown that psychological reactance may be related to family of origin dynamics. Autonomy is developed through a secure attachment. Dowd (1993) stated that autonomy is fostered by an optimal level of reactance, and one's personal identity is dependent on the development of a flexible autonomy. This study explored the relationship between psychological reactance and attachment. Additionally, research has suggested that level of reactance may be related to level of autonomy. This relationship was empirically explored. Participants were assessed using the Therapeutic Reactance Scale (TRS), the Inventory of Parent and Peer Attachment (IPPA), and The Adjective Checklist. The results failed to indicate that reactance, attachment, and autonomy were interrelated but did support the relationship between reactance and autonomy.

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CHAPTER 1

Introduction

The present study examined the interrelationships among psychological reactance, attachment, and autonomy. Brehm (1966) developed a theory of psychological reactance, which states that when people lose a freedom or are threatened with the loss of a freedom they have a tendency to respond in an effort to reestablish that freedom. This motivation to restore the lost or threatened freedom is what has been labeled psychological reactance.

Brehm (1966) originally believed reactance to be a force present in all individuals that were faced with a loss or threat of a loss of a freedom; however, later it became more clear that psychological reactance may better be conceptualized as a personality characteristic than it was a reaction to specific situations (Brehm & Brehm, 1981). Individuals who possess the personality characteristic of psychological reactance also tend to be autonomous (Dowd & Wallbrown, 1993; Merz, 1983), independent, and desire autonomy in their work environments (Dowd, Wallbrown, Sanders, & Yesenosky, 1994; Buboltz, Woller, & Pepper, 1999). Many other characteristics of reactant individuals have been found as well and will be discussed later in this paper; however, autonomy and independence are the characteristics of particular interest in this study.

Seibel (1994) found that psychological reactance, as measured by the Therapeutic Reactance Scale (TRS) and the Questionnaire for Measuring Psychological Reactance (QMPR), appeared to have a developmental factor that represented autonomy and interpersonal isolation. She also found the TRS's Behavioral Reactance subscale to be negatively correlated with trust and intimacy, also supporting a developmental dynamic at work in the development of reactance. Tennen, Press, Rohrbaugh, and White (1981) see psychological reactance as part of one's development in that it is more pronounced when one's developmental task is to gain autonomy. Dowd and Seibel (1990) proposed a theory in which they state that one's identity is developed secondarily to the development of reactance. Reactance develops through one's parents fostering separation and autonomy, in addition to consistency and love. Without the secure climate provided by one's parents, one would not develop the psychological reactance necessary to ultimately develop one's own identity. Without the developmental processes that foster reactance, one might be reduced to a state of dependence and conformity.

Attachment is important to development because of the sense of security it provides (Ainsworth, Blehar, Waters, &Wall, 1978; Bowlby, 1977; Erikson, 1963). This sense of security affords people the opportunity to interact with their environments. These interactions inevitably lead to positive experiences that are then naturally repeated so that individuals develop a sense of autonomy. People who did not develop a secure attachment will lack the opportunities to interact with their environments or will have less

positive social interactions. These individuals can develop to be avoidant or ambivalent in their interactions, which can further impede their social development.

With research suggesting that the personality characteristic of psychological reactance may be developmental in origin (Johnson & Buboltz, 2000; Seibel, 1994; Tennen et al., 1981; Pepper, 1996; Buboltz, Johnson, & Woller, 1999), the question naturally arose as to whether attachment to one's primary caregiver impacts the development of reactance. Conceding that attachment to a primary caregiver is a major precursor of the development of autonomy, this study sought to investigate the relationship between autonomy and psychological reactance and attempted to clarify the interrelationships among psychological reactance, adult attachment, and autonomy, which were previously poorly understood.

Statement of the Problem

While research pointed to a relationship between psychological reactance and developmental antecedents related to one's family of origin, the direction and magnitude of the interrelationships among psychological reactance, attachment, and autonomy were much less clear.

Johnson and Buboltz (2000) hypothesized that psychological reactance may be related to Bowen's (1978) concept of differentiation of self in that they are both related to family functioning and family development. Bowen described differentiation of self as a separate sense of self without reactively separating from others, which is similar to Dowd and Seibel's (1990) definition of reactance as autonomy without excessive reactivity.

Therefore, reactance may be related to low levels of differentiation of self, supporting a developmental etiology of reactance (Johnson & Buboltz, 2000).

Johnson and Buboltz (2000) found that lower levels of individuation from one's family of origin were predictive of higher levels of reactance among their sample of college students. They concluded that highly reactant individuals felt that their freedoms were threatened because they had not individuated from their parents, felt responsible for them, and controlled by them. Thus, highly reactant individuals were low on autonomy. They suggested that psychological reactance might be a factor resulting from difficulty differentiating from one's family of origin.

Data connecting psychological reactance to development, one's relationship with one's family of origin, and ultimately to the development of autonomy are lacking. Students who had not individuated from their families were less autonomous, and a failure to differentiate could result in further problems (Johnson & Buboltz, 2000). For example, college students who reported being overly connected emotionally to their parents had lower levels of self-esteem and lower levels of adjustment to college (Fleming & Anderson, 1986). They called for future research on psychological separation and adjustment in a way that considers various dimensions of psychological separation.

On the other hand, in a study by Kenny (1990), a sample was tested that was strongly attached to their parents, encouraged by their parents to be independent, and comfortable knowing that their families would be there to help them if necessary. With this sample a lack of separation from one's family of origin lead to feelings of autonomy

rather than prevented autonomous functioning. Affective closeness to one's parents could foster independence just as easily as it fosters dependency (Kenny, 1990).

Baumrind (1971) also suggested that relationship to parents, by way of parenting style, plays an important role in the development of independence. She reported that authoritative parents encourage autonomy and independence in their children by balancing high control with positive encouragement. In contrast, authoritarian parents are controlling without warmth and permissive parents are warm but not controlling. Children of authoritarian and permissive parents were less autonomous and independent than children of authoritative parents.

Erikson's theory (1963) suggested that when children insist or demand to behave as they choose then they are asserting their autonomy. Oppositional behavior is a healthy part of one's development and leads to autonomy according to Brehm and Brehm (1981); however Kenny (1990) found that attachment to one's parents also fosters autonomy. It seems that the key may be a safe relationship with one's parents that allows a child to be oppositional while having the security that he or she will still be regarded positively by his or her parents that leads to the development of autonomy. Dowd and Seibel (1990) suggested that an optimal level of psychological reactance leads to an optimal level of autonomy. So in order for a person to develop a healthy sense of independence and autonomy, he or she must possess a sense of psychological reactance, which can only be obtained at optimal levels by having a healthy sense of attachment to one's parents that encourages exploration of one's freedoms while maintaining a sense of security.

Previous studies left researchers unclear regarding what family factors or dynamics lead to the developmental precursors of psychological reactance. Thus, this study was necessary to explore and answer the question about the development of psychological reactance. It was expected that attachment, defined by Bowlby (1978) as the strong affectional bond to a preferred individual, would precede autonomy, defined as the ability to regulate one's own behavior (Noom, Dekovic, & Meeus, 1999), which would precede optimal reactance, defined by Dowd and Seibel (1990) as a separate sense of self without excessive reactivity.

Justification

While reactance is a relatively new construct, its value as an area of research is well founded. Psychological reactance is particularly important in psychotherapy research because a personality characteristic such as reactance may provide information that cuts across demographic client variables such as age, gender, race, ethnic background, and socio-economic status (Dowd et al., 1994).

Highly reactant clients are often perceived as resistant and challenging by their therapists (Bischoff, 1997). Research may help therapists to be more effective in working with difficult clients who are reactant. Dowd, Hughes, Brockbank, Halpain, Seibel, and Seibel (1988) conducted research to test the hypothesis that defiance based therapeutic strategies would be more effective in working with highly reactant clients than compliance based therapeutic strategies. While their hypothesis was not fully supported, they did find evidence to suggest that reactance may mediate the effectiveness of all

treatment strategies. A main effect of reactance level on therapeutic expectations was also present with highly reactant individuals having lower expectations for therapeutic change.

Seibel and Dowd (1999) found that reactant clients in therapy tend to be argumentative, distancing, and limit setting, thereby increasing the boundary between themselves and the therapist. Even with this distance created by the clients' psychological reactance, it could still be said that the clients were engaged in a therapeutic relationship. This is in contrast to a behavioral disengagement and uninvolvement in therapy such as missing sessions. Because of the importance of a working alliance, therapists may feel a need to break through clients' reactance; however, Seibel and Dowd (1999) suggested that an oppositional engagement in therapy may be better than no therapeutic affiliation. Interestingly, behavioral reactance was not associated with good psychological health and these clients were more likely to terminate early, but verbally reactant clients did show improvement in well-being and psychological health.

Dowd and Sanders (1994) suggested that when working with highly reactant clients, the counselor should not threaten the client's free behaviors, should not make interpretations that are very inconsistent with the client's ideas, and should not conduct too structured a counseling session. They state that highly reactant clients would likely have the greatest appreciation for, and benefit most from, "a direct, no-nonsense counseling style" (p. 22). Dowd and Sanders (1994) further caution that change is likely to be slow in highly reactant clients, thus patience and repetition are important tools in

effectively working with these clients. Their research on reactance in therapy has benefited therapists trying to work with reactant clients because of the encouragement to be patient and satisfied with small accomplishments it suggests when working with difficult and sometimes hostile clients.

Johnson and Buboltz (2000) suggested that therapists may address the possibility of lack of differentiation of self in clients that appear resistant and reactant. Graybar, Antonuccio, Boutilier, and Varble (1989) suggested that physicians should use the Therapeutic Reactance Scale to know how to best convey advice to their patients in order to maximize the likelihood of compliance. Further research in the area of reactance may provide insight to therapists when working with reactant clients.

Reactance may be an especially important construct in career counseling because highly reactant individuals may make career decisions as a reaction to their parents' wishes if they have not achieved a healthy sense of differentiation from them (Johnson & Buboltz, 2000). Highly reactant individuals may also involve themselves in relationships in reaction to their parents' wishes because of a lack of differentiation of self. Another issue that may be addressed in therapy is the family's rules and myths that can influence one's beliefs and values, which in turn lead to the development and maintenance of family traditions (Bratcher, 1982). For example, some families may have "rules" that women cannot explore careers in which they would earn higher salaries than men, or that women may not seek careers outside the realm of what are considered traditionally

feminine careers, or that men may not seek careers that are not considered traditionally masculine careers. Family traditions may lead to early foreclosure in career exploration.

Counselors should keep in mind however that the goal for some individuals may be to find a job within a certain geographical location or some other limitation that may appear at first to be foreclosure in career exploration (Bratcher, 1982). However, this may be a well thought out decision on the part of the individual. It may not be necessary for counselors in this situation to encourage the exploration of other alternatives because individuals are likely to stick to their decisions until personal growth leads them to seek a more fulfilling work experiences. The issue of remaining in a geographic location may or may not be an issue of separation from family and differentiation of self. More information about relationship to one's family of origin, autonomy, and reactance would be beneficial in the area of career counseling.

The possibility that psychological reactance as well as one's relationship with one's family of origin may impact satisfaction with one's work situation is important because dissatisfaction in one area of one's life, such as career, will generally cross over to other domains and lead to dissatisfaction in those areas as well, such as marital problems (Bratcher, 1982). These additional problems may be brought on by difficult work situations or may be a way that the clients are escaping from or hiding the problems in their careers. By making information available to counselors about these complex interrelationships, it may allow them to direct sessions in such a way that clients can solve the true issue rather than what may just be a symptom of a larger problem.

Another area of investigation in this study was attachment. An important reason to conduct further research on adult attachment was given by Kenny (1990) whose research supported the view that parent-child relationships continue past childhood and parental support is associated with competent functioning. Erikson's (1963) theory demonstrated how social relationships, particularly those early interactions with one's caregivers, affect personality development. Ainsworth et al. (1978) also supported an influence of attachment on adult personality. Baumrind (1971) explained how parenting styles contribute to the personality development of children. Bowlby (1978) also discussed the implications of attachment on behavior into adulthood. Since attachment to parents affects one's development in young adulthood, it seems likely that it would play a significant role in career exploration and decision making. Conflictual independence from the opposite sex parent was the strongest predictor of vocational identity in men and women (Lopez, 1989). Blustein, Walbridge, Friedlander, and Palladino (1991) also found that conflictual independence from one's parents played a large part in the process of committing to a career choice. These findings lent support to conducting future research on psychological separation and adjustment in a way that considered various dimensions of psychological separation and gender.

Studying psychological reactance, especially in regard to how it relates to family dynamics, may give insights to counselors working with reactant individuals that can improve the therapeutic interactions. Attachment is relevant to many problems for which people seek therapy; therefore greater knowledge of how attachment affects development

of personality variables can also aid in designing the most appropriate therapeutic interventions with clients with attachment related difficulties. One's level of attachment influences the levels of autonomy and reactance one will develop, which is particularly important in the area of career counseling. Whether it be in traditional counseling or career counseling, attachment, autonomy, and reactance may all impact the way that counseling should be conducted to make it maximally effective, and therefore warrant further study.

Review of Related Literature

Theory of Psychological Reactance

Psychological Reactance was originally proposed by Brehm (1966), to be a psychological construct defined as a motivational force that occurs in some individuals who have lost their freedom or had their freedom threatened. Reactance motivates individuals to regain or attempt to regain the lost or threatened freedoms.

Brehm's (1966) theory of reactance was based on the assumption that at any given time there are behaviors in which people may choose to engage, either then or at some point in the future. The behaviors in which people may engage are called "free behaviors" (Brehm, 1966). One should note that free behaviors are only those that are realistically possible (Brehm, 1966). It is not realistically possible that people may make themselves invisible and do as they choose, nor is it realistically possible that people may enter a bank and receive large amounts of money, beyond what is theirs, without putting up something for collateral. Naturally, not having unlimited financial resources or the

ability to go where one chooses without restriction limits one's freedom, but these are not considered "free behaviors" in the sense that Brehm suggests will result in reactance when threatened.

In order for a behavior to be free, one must have the relevant physical and psychological abilities to perform the free behavior. One also must know through either experience, general custom, or formal engagement that one is free to engage in the desired behavior (Brehm, 1966). Brehm (1966) states that without the freedom to pursue free behaviors to meet various needs, one would not only fail to have needs met, but also could experience deprivation, pain, or death. Therefore, the freedom to choose behaviors to meet one's needs is essential for survival (Brehm, 1966).

Brehm's (1966) theory of reactance posits the following:

> The magnitude of reactance is a direct function of (1) the importance of the free behaviors that are eliminated or threatened, (2) the proportion of free behaviors which are eliminated or threatened, and (3) where there is only a threat of elimination of free behaviors, the magnitude of that threat. (p. 4)

The importance of a behavior is the value it has in meeting that individual's needs multiplied by the actual or potential importance of those needs (Brehm, 1966). The person need not have an immediate need in order to feel that the need is important; one needs only to believe that he or she may have that particular need in the future. If there is an alternative way to get one's specific need met other than by the behavior that has been

threatened or lost, then the lost or threatened behavior is of lesser importance. For example, one may communicate with others via telephone, Internet, and e-mail, and may pay one's bills electronically. This individual may have no immediate need to mail a letter. With the recent anthrax scare proliferated by the news media, some have begun to question the use of mail through the United States Postal Service. As long as one has other means by which to communicate with others, loss of US mail may not be perceived as an important loss; however, to the extent that one believes that he or she may need to send or receive a letter in the future, and to the extent that one believes that the US mail is the only means through which this can be accomplished, then this becomes an important freedom.

Brehm (1966) postulated that the magnitude of reactance is also a direct function of the relative importance of the threatened or eliminated freedom compared to the importance of other freedoms at the time. For example, the freedom to mail a letter may not be so important relative to one's ability to speak freely. To illustrate this concept, suppose two college roommates, Jack and John, combine their money to buy two compact disks (CD) and a stereo and agree to draw straws to see who keeps the items after graduation. If the roommates both preferred CD number one to CD number two and Jack drew the long straw and got CD number one then John would experience some psychological reactance. However, if they agreed that one would take both CDs and the other would take the stereo and John drew the long straw and got the stereo but did not get his favorite album then he would experience less reactance because of the relative

importance or value placed on his freedom to keep his favorite CD compared to the value of the freedom to keep his stereo. In the first case the favorite CD was valuable compared to the second choice CD, so losing that freedom (the favorite CD) would result in higher levels of psychological reactance. In the second case the favorite CD was not very valuable compared to the stereo, so losing that freedom (the favorite CD) would result in lower levels of psychological reactance.

Tennen et al. (1981) examined the relative number of freedoms threatened and found that individuals with fewer freedoms responded with higher levels of reactance to a freedom being lost or threatened. Brehm and Brehm (1981) defined a threat as any kind of social influence, behavior, or event that works against one's ability to exercise a freedom. They discovered that psychological reactance could be aroused in individuals who had anticipated a threat rather than actually experienced it. They purport that individuals choose whether to attempt to regain the lost or threatened freedom by weighing the value of the freedom against the potential costs of attempting to regain it. If individuals perceive there to be a high cost associated with attempts to regain lost or threatened freedoms then they may actually try to deny that they experienced any loss. The loss of the freedom did not actually have to occur for psychological reactance to take place.

The proportion of the threatened or eliminated freedom also determines the magnitude of reactance (Brehm, 1966). For example suppose John takes his stereo to his new apartment where he frequently enjoys listening to his music loudly. Suppose John's

neighbor to the right comes over and explains that every morning she practices meditation from 8 o'clock to 9 o'clock and requests that during that time he not play his music loudly. John has lost a small amount of his freedom to play his music loudly and may experience some psychological reactance. Now suppose that his neighbor to the left comes over and explains that he works nights and sleeps from 8 o'clock in the morning until 4 o'clock every afternoon and requests that John not play his music loudly during that time. John is likely to experience a much higher degree of psychological reactance to this request than to the request of the first neighbor because a greater proportion of his freedom has been threatened.

The magnitude of reactance was also postulated to be moderated by how great the likelihood of a threat being carried out is (Brehm, 1966). This occurs when one loses one freedom and then feels that other related freedoms are now also likely to be lost. For example, if the freedom to carry a pocketknife on an airplane is lost, then one may feel a greater likelihood that the freedom to carry paper clips, safety pins, or nail clippers on an airplane will also be lost. A greater perceived threat may also be caused by the threat or elimination of another person's free behaviors (Brehm, 1966). For example, if one observes passengers on an airplane being stopped at the gate and being told that they cannot take their carryon luggage onto the airplane then one may feel a greater likelihood that he or she will also lose the freedom to take carryon luggage onto an airplane.

Brehm and Brehm (1981) revised their original theory to include four factors that influence psychological reactance: (1) perceived importance of the freedom, (2) the

number of freedoms being lost or threatened, (3) how strongly one believes that one truly possesses the freedom, and (4) the magnitude of the threat to the freedom. Dowd (1989) proposed that reactance is the result of a motivation to gain or regain control over one's self and the situations in which one finds oneself. Dowd proposed that this motivation for control might be due to the assumption that people should be in control of themselves and the situations in which they find themselves. He suggested that this cognitive tendency may be particularly true of individuals who place a high value on autonomy, such as those in North America and Western Europe. He stated that these populations may be more reactant to the loss of personal or social control than are those of Eastern cultures because of the higher value placed on control in western societies.

The reactance to having a freedom lost or threatened may be to attempt to engage in whatever behavior was lost, called direct restoration of freedom (Brehm & Brehm, 1981). Reactance may also include observing others engaging in the behavior in which one has lost the freedom to engage, called indirect restoration of freedom. One may also reduce reactance by engaging in a behavior similar to the one in which one has lost the freedom to engage, or by responding aggressively to the person or situation which threatened one's freedom (Brehm & Brehm, 1981; Dowd, 1993; Dowd, Milne, & Wise, 1991).

Motivation for Control

"One's response to psychological arousal has been found to depend on the extent of the arousal and the cost of reestablishing the freedom" (Pepper, 1996, p. 18). One

does not have to regain the freedoms that have been lost or threatened in order to reduce their levels of psychological reactance; Brehm, (1993) suggested that reactance is related to the need to have the control necessary to exercise a freedom rather than the need to actually exercise that freedom. Dowd (1989) suggested that the motivation for control suggests a need for control over oneself and if one cannot achieve this level of control then one may resort to other forms of reactance -- including destruction. Responses may range from an internal feeling of discomfort to feelings of hostility, aggression, and direct attempts to regain control (Brehm & Brehm, 1981). Brehm (1993) found a freedom may change in perceived value after it has been threatened or lost, becoming more valuable after it is out of reach.

Reactance and Learned Helplessness

Researchers have been interested in the relationship between reactance, resulting from continued loss of freedom, and Seligman's (1975) concept of learned helplessness. Wortman and Brehm (1975) added that number of failures played a role in determining whether a people experience reactance or helplessness. When faced with few failures people still expect to be in control of outcomes; therefore performance should improve because they become reactant and try to exert greater control over their situations. However, when faced with many failures, performance declines and learned helplessness becomes apparent. A single failure lead to frustration and greater than four failures lead to depression (Mikulincer, 1988).

Tennen et al. (1981) suggested that two types of people are most prone to reactance. The first type is people who believe that they do not have many free behaviors. For these people a threat to a freedom is significant because it is seen as a threat to a large proportion of the total number of freedoms that they possess. The second are people who feel that their behavioral freedoms are very important. These people have a strong need to see themselves in control and therefore react strongly to any loss or threat of loss of freedom.

Reactance as a Personality Characteristic

Originally Brehm (1966) perceived psychological reactance as a response that would be elicited in all individuals following a situation in which freedoms were lost or threatened; in other words, a situation-specific construct or a response to social influences. More recent research however has suggested that while reactance is situational in nature, it can also be more stable personality characteristic (Brehm & Brehm, 1981; Dowd et al., 1991; Hong & Page, 1989). Brehm and Brehm (1981) suggested that life experiences may influence perception of freedoms and the relative importance of freedoms.

Research on the personality characteristics related to reactance reveal that psychologically reactant individuals, as measured by the Therapeutic Reactance Scale (TRS), may be less interested in making a good impression on others than they are in being themselves (Dowd, et al., 1994). Reactant individuals may be skeptical and intolerant of others' beliefs and values, independent and self-sufficient, dominant,

assertive, and confident (Dowd et al., 1994). Psychologically reactant persons may resist rules, pay little heed to their duties and obligations, hold a high opinion of themselves and may express their emotions and opinions freely (Dowd et al., 1994). People who scored high on reactance also showed a propensity toward worrying about problems and the future and being more concerned with practical interests rather than abstract ideas. Reactant individuals may be inclined to start tasks but fail to complete them, and may prefer to work in settings where strict rules are rare and instead they are granted a high degree of personal freedom and their initiative is recognized. An especially strong characteristic of reactant individuals is their lack of concern for making a good impression.

The parallels between personality characteristics and reactance seen by Dowd et al. (1994) are consistent with the results seen by Dowd and Wallbrown (1993) who found clients scoring high on measures of reactance to be more difficult than those scoring low on reactance. Investigators also noted that highly reactant clients were more aggressive, dominant, defensive and quick to take offense, autonomous, and nonaffiliative. Reactant individuals seemed to be more likely to possess several characteristics commonly deemed negative by society; however, Dowd and Wallbrown (1993) found these individuals to be action oriented and leaders in society.

Personality characteristics of reactant individuals are similar to characteristics of individuals labeled as psychopathic deviants and include: lack of regard for rules of society, lack of responsibility, low self-control, narcissistic personality characteristics,

lack of impression management, high self-confidence, and low tolerance (Dowd et al., 1994). People scoring high on measures of reactance may respond in ways perceived as antagonistic by others when they feel that their freedom of choice has been threatened (Joubert, 1990). The reactant individual's attempt to regain control of lost or threatened freedoms may be less conventional and acquiescent than the attempts of less reactant individuals. The way that reactant individuals respond may not be understood or accepted by society in general, which results in their social isolation. Although loneliness and self-esteem have been shown to be inversely correlated (Shaver & Rubenstein, 1980), Joubert (1990) hypothesized that reactant individuals may experience loneliness despite having high self-esteem. Self-esteem scores in women were negatively correlated with reactance, as measured by the Hong Psychological Reactance Scale; however, this correlation did not exist among men (Joubert, 1990).

In a study of the Holland Code Type and psychological reactance Buboltz et al. (1999) regressed the Therapeutic Reactance Scale (TRS) and Questionnaire for the Measurement of Psychological Reactance (QMRP) onto the six Holland personality types measured by the Self Directed Search (SDS). They discovered that three of the six code types, Investigative, Social, and Enterprising, had significant beta weights for both the TRS and QMPR and found that psychological reactance increased for individuals as they become more analytical, independent, intellectually oriented, and curious (Investigative). They also observed that psychological reactance increased for individuals that were more adventurous, domineering, self-confident, ambitious, and who liked to lead

(Enterprising). They also saw that psychological reactance decreased among individuals who were cooperative, empathetic, sociable, friendly, and helpful (Social).

Buboltz et al. (1999) added to the body of research on personality characteristics of reactant individuals through their findings that psychologically reactant individuals may have a preference for manipulation of others, be persuasive, and nonconforming. They also noted that psychologically reactant individuals see themselves as self-confident, aggressive, domineering, independent, and unable to understand others, results consistent with previous findings (Dowd et al., 1994; Dowd & Wallbrown, 1993). Psychologically reactant individuals may also see themselves as popular, adventurous, ambitious, and with desires for status and power. These characteristics combined with the desire for control, disregard for rules and obligations, and dislike of social interactions, using interpersonal skills, and confinement may lead them to pursue careers in environments in which they are allowed to engage in activities of their preference, have autonomy, and do not have to have close interactions with others.

Merz (1983) found that psychological reactance correlated highly with autonomy, as well as insecurity, suggesting a complex relationship between psychological reactance and personality. Some of the characteristics associated with psychological reactance are found to be sociably desirable while others are not.

Gender Differences

Several researchers have observed gender differences in reactance. Men were significantly more reactant on the Therapeutic Reactance Scale (TRS) than women, but

there was no difference when using the Questionnaire for the Measurement of Psychological Reactance (QMPR) (Dowd et al., 1994; Courchaine, 1993). Men were significantly more reactant than women on the TRS according to Mallon (1992), and men were more reactant than women on the TRS and the QMPR according to Loucka (1991). Joubert (1990) found that men scored higher than women on the Hong Psychological Reactance Scale.

Results from the Dowd et al. (1994) study suggested that women who scored high on reactance were more concerned with being themselves than making a good impression on others and were more resourceful and self-reliant than less reactive women. Personality characteristics correlated with reactance in women include skepticism, intolerance, resistance to rules, decisiveness, sociability, self-assurance, spontaneity, confidence, assertiveness, emotionally reactivity, arrogance, and disregard for obligations. Whereas reactant individuals generally are more concerned about the future than nonreactant individuals, this is less true of reactant women.

Dowd et al. (1994) theorized that differences in reactance between men and women may be in part due to the socialization patterns of the sexes. They said that in general men tend to be more self-assured and decisive than women; therefore these characteristics appear to be more readily noticeable in reactant women than in reactant men. While there were more similarities between reactant women and reactant individuals as a whole, the characteristic of sociability emerged as associated with reactance only in the sample of women. Dowd et al. (1994) concluded that the sociability

found in reactant females may be associated with self-assuredness, while males are not as likely to have been trained to be sociable regardless of whether they are self-assured or reactant.

In a study by Malinckrodt (1992), women reported significantly more social support and significantly less general self-efficacy than men. Women also tended to rate their fathers as more caring than men rated their fathers. For both men and women receiving care from both parents was related to social support and social self-efficacy. A strong sense of social self-efficacy reported by adults was related to their memories of care or emotional responsiveness from their mothers and fathers. Care from and attachment to both mothers and fathers seems to be important to positive development.

Theory of Attachment

Bowlby's (1977) theory of attachment between infants and their caregivers stresses the importance of physical proximity. The attachment bond serves to encourage children to explore their environments while maintaining a sense of security. Caregiver responsiveness and availability in meeting the child's emotional needs fosters the development of a positive self-image and image of the environment. The development of this sense of security is important to the development of healthy and satisfying interpersonal relationships in adulthood.

Ainsworth et al. (1978) identified three patterns of infant behavior that are behavioral manifestations of a child's attachment type: secure, avoidant, and anxious/ambivalent. The attachment type is inferred by the infant's responses after a

sequence of being separated and reunited with the primary caregiver in what has come to be known as the "strange situation." The securely attached infant uses the primary caregiver as a secure base and explores the environment returning to the caregiver occasionally. When the caregiver leaves the infant is upset and prefers the primary caregiver to a stranger. The avoidant infant explores the environment without returning to the primary caregiver as a secure base. When the primary caregiver leaves the infant seems unbothered, and when the caregiver returns, the infant punishes the caregiver by ignoring or avoiding him or her. The avoidant infant treats strangers the same as the caregiver. The anxious or ambivalent infant refuses to explore the environment and is extremely anxious when the primary caregiver leaves the room. When the primary caregiver returns the infant seeks contact with him or her but simultaneously pulls away in anger.

Bowlby (1977) identified three types of insecure attachments in adults; anxious, compulsive self-reliant, and compulsive care giving. The anxious attachment type constantly worries about the availability of love and support, seek care, and have intense reactions to separation from the people in their lives on whom they rely, i.e. spouse or children. They are dependent on others for decision making and problem solving. Bowlby suggested that this attachment type developed because in infancy these children were anxious and doubted the availability and responsiveness of their primary caregivers.

The opposite type of adult attachment is the compulsive self-reliant type (Bowlby, 1977). Self-sufficiency takes the dominant role in the life of this attachment type. They

are distrustful in close relationships and tend to avoid seeking help or affection from others. As infants this attachment type was also anxious and doubted the availability and responsiveness of their primary caregivers; however, these individuals inhibit their desires for attachment and interpersonal closeness.

The compulsive care giving attachment type of adult may develop close relationships, but they always assume the role of caregiver and never allow themselves to be the receivers of care. Bowlby (1977) believed that this personality type developed from childhood experiences, in which the child was prematurely placed in a position to be a caregiver to a parent or sibling.

Characteristics of Adults with Different Attachment Styles

Attachment theory suggests that loss and recovery experienced by individuals help to establish personality characteristics (Pepper, 1996). Using the Inventory of Parent and Peer Attachment, Armsden and Greenberg (1987) found that adolescents' perceived quality of attachment to parents and peers was positively correlated with well-being. Securely attached adolescents reported a greater satisfaction with self, a greater likelihood of seeking social support, and fewer negative life experiences than less securely attached participants.

Adults who are willing to depend on others to meet their emotional needs and are not very anxious about being abandoned, described their parents as warm and accepting, suggesting an earlier secure attachment to their caregiver (Collins & Read, 1990). On the other hand, adults with lower perceived self-worth and lower social confidence described

their parents as being cold and inconsistent, indicating an insecure attachment to their caregiver. Developmental and social psychologists have demonstrated the importance of early childhood experiences in the development of self-efficacy, attributional style, and social skills (Mallinckrodt, 1992; Baumrind, 1971). Theory, as well as research, suggests that parent child attachment, i.e. emotional responsiveness and control, influences the social competency of adults.

Malinckrodt (1992) also found a negative correlation between care from parents and external attributions, indicating that children who perceived their parents as being emotionally aloof and unresponsive tended to attribute social outcomes to external causes. However, perceptions of parents as highly emotionally responsive did not correlate with an internal attributional style. Unexpectedly, both internal and external attributional styles seem to be related to a cold and unresponsive parenting style.

Mallinckrodt (1992) also discovered that strong parent bonds were associated with high levels of social support, whereas overprotection, especially from the same sex parent, was negatively associated with social support. Implications for counseling are that support groups may not be sufficient to remediate social support deficits from clients' pasts. However, Mallinckrodt suggests that interpersonal relationships with emotional responsiveness may be able to compensate for lack of secure attachment in early childhood.

Attachment and Autonomous Functioning in Adulthood

While the value of parental attachments in infancy and early childhood has been studied for decades, the value of parental attachments beyond childhood is gaining interest (Kenny, 1990). Attachment to parents provides a secure base for exploration and fosters mastery of one's environment and development of social and intellectual competence. It is generally assumed that parental attachments diminish during college. However, this may be a time when adolescents are in need of a secure base in helping them transition and master their new environment and develop social and intellectual competence in a new milieu. A stable parental attachment may serve to promote autonomy and competence in young adulthood as well as in infancy and childhood.

While the transition to college is for many a step toward autonomy and independence, it typically does not occur independently of the college student's family (Lopez, Campbell, & Watkins, 1988). Adjustments within the family of origin that support the young adults' transition into independence are healthy. Wechter (1983) noted that as adolescent children mature and become more independent, conflict occurs within the family requiring the family to learn new ways of relating to one another. The family has to encourage autonomy and independence in order for the adolescent to develop an appropriate sense of self. Sullivan and Sullivan (1980) observed that for men physical separation from family during college promotes independence and positive emotional bonds with one's parents.

Fleming and Anderson (1986) found that college students who reported being over connected emotionally to their parents had lower levels of self-esteem and lower levels of adjustment to college. On the other hand, Kenny (1990) reported strong levels of attachment to their parents, encouragement by their parents to be independent, and comfort knowing that the family would be there to help among adults. Retrospective reports of parents' role in fostering autonomy were also positively correlated with recollections of parental guidance in making career plans for men and women. Within this sample a lack of separation from one's family of origin was associated with feelings of autonomy rather than the prevention of autonomous functioning. These two studies showed that affective closeness to one's parents is not the same as dependency or the opposite of independence (Kenny, 1990).

Kenny (1990) also noted a positive relationship between parental attachment and assertion, social self-esteem, and absence of shyness found in college freshmen that was not found in college seniors. For seniors parental attachment was associated with social competence, specifically maturity in career planning. One possible scenario, during the first years of college transitions are made in forming relationships and building self-confidence, but in one's senior year success is related more to academic achievement and career than social relationships. While women and men both maintained close relationships with their families of origin, only women perceived their parents as a source of social support. Both genders viewed their relationships with their parents positively and both perceived their parents as fostering autonomy.

To recap, Kenny's research supported the view that parent-child relationships continue past childhood and parental support is associated with competent functioning. While conflictual independence (freedom from guilt, anger, and resentment toward parents) is related to adaptive psychological functioning, emotional, attitudinal, and functional independence from family of origin were not related to college adjustment. A limitation of this study was that the students were from more affluent families who were dependent on their families for financial support, which may have influenced the students' perceptions of their family of origin as positive.

College students who view their parents' interactions positively also perceive their parents to encourage autonomy and provide emotional support (Kenny, 1990). Whereas men described their parents as providing moderate support on average, women perceived their parents to provide higher levels of support. Women also reported that they were more likely to seek out the help of their parents when they were experiencing stress. Women were also more likely than men to discuss their problems with college friends. Men, on the other hand, were more likely to report that they worked out their problems on their own. The relationship between attachment and assertion and dating competence was insignificant.

In a cross-sectional study, female college freshmen through seniors were assessed on their levels of autonomy and parental attachment (Taub, 1997). She found that autonomy increased significantly with each class year, but parental attachment did not significantly decrease. The women in the study gain significant emotional independence

from their peers but no significant gains in emotional independence from their parents. Taub's findings suggest that undergraduate women become more autonomous without experiencing a reduction in their attachment to their parents.

Families that had high levels of marital conflict as well as other dysfunctional interactions were likely to experience conflict as the adolescent began the process of psychological separation from the family (Lopez et al., 1988). Families who were not experiencing conflict were likely to encounter less conflict when the adolescent began to detach. Lopez et al. (1988) found gender differences for type of psychological separation and level of family conflict. For example, men from conflictual families were conflictually dependent on their families of origin but detached themselves from the family attitudinally. Women from conflictual families had increased levels of conflictual, functional, and emotional attachment to their families of origin. Women from dysfunctional families were especially likely to be drawn into dysfunctional roles to insure the support and approval of their parents. Women from dysfunctional families were therefore at greater risk for conflict in psychological separation.

Women from families where there was marital distress tended to have more conflicted and dependent parent-child relationships. While men from families where there was marital distress also had more conflicted relationships, they were more likely to have distant relationships with their parents. While marital conflict and family structure may not prevent adolescents from differentiating from their families of origin, it may hinder psychological separation (Lopez et al., 1988). A recommendation for college

counselors is to assess the students' families' level of conflict and assess how likely the student is to be drawn into the conflict.

Development of Autonomy

Noom et al. (1999) discussed the importance of autonomy and attachment for psychosocial adjustment. They defined autonomy as the ability to regulate one's own behavior and attachment as the quality of relationships with significant others. Autonomy and attachment are not opposites but rather attachment fosters autonomy and autonomy facilitates attachment. Attachment not only fosters closeness but also independence and autonomy (Blustein et al., 1991).

Since attachment to parents affects development in young adulthood, it should play a significant role in a young adult's development of autonomy. Overidentification with one's family, or the lack of differentiation of self, may reduce one's level of autonomy (Morrow, 1995). Extreme loyalty to one's family of origin, or extreme cohesion, can also impede one's development of autonomy. Families who allowed their adolescents to think independently tended to have offspring who were more flexible in their career exploration, while rigid families did not provide their adolescents with an environment conducive to broad career exploration. The ideal family balanced independence and connectedness optimally.

Encouraging autonomy in adolescents while maintaining family cohesion requires parental balancing of rules and structure (Morrow, 1995; Baumrind, 1971). This adjustment to can be facilitated by the use of parental communication skills, such as

empathy and active listening. Negative communication on the other hand, such as criticism and mixed messages, can impede adjustment and adaptation. A family's ability to effectively communicate their needs and desires is essential to adjustment. It is possible for an individual to separate psychologically from one's family if the family system has flexible boundaries that allow and encourage autonomy (Bratcher, 1982).

Developmental Perspective on Reactance

Dowd and Seibel (1990) theorized on the importance of parenting skills such as consistency, acceptance, and encouragement of autonomy in a child's development of a healthy identity and optimal level of reactance. The optimal level of reactance is achieved when one has the ability to function autonomously and holds a functional sense of self without having an excessive level of reactance. From a developmental perspective parents should encourage autonomy in their child while remaining a secure base or attachment for the child to return to for reassurance if the child is to develop a healthy sense of self and optimal level of reactance.

Tennen et al. (1981) observed that the probability of client reactance is related to development, and that it was probably more pronounced in adolescence and the elderly. The former are asserting independence while the latter are losing it.

The developmental etiology of reactance has been assessed by Pepper (1996), who found that the positive resolution of Erikson's psychosocial stages was related to low levels of reactance while unresolved stages were related to high levels of reactance. Buboltz, Johnson, and Woller (1999) also found evidence to support a developmental

perspective to reactance, namely that a family's cohesiveness, conflict, moral-religious emphasis, independence, and orientation toward achievement affected college-aged children's level of psychological reactance. They also noted higher levels of reactance in children from divorced than intact families.

Johnson and Buboltz (2000) hypothesized that psychological reactance may be related to Bowen's (1978) concept of differentiation of self, which Bowen defined as a separate sense of self without reactively separating from others. Dowd and Seibel (1990) similarly defined reactance as autonomy without excessive reactivity. Therefore, Johnson and Buboltz (2000) hypothesized that reactance may be related to low levels of differentiation of self, supporting a developmental etiology of reactance. Results supported the hypothesis and revealed that lower levels of individuation from one's family of origin were predictive of higher levels of reactance. Investigators concluded that highly reactant individuals felt that their freedoms were threatened because they had not individuated from their parents, felt responsible for them, and controlled by them. Highly reactant individuals appeared to be low on autonomy. They suggested that psychological reactance may be a factor resulting from difficulty differentiating from one's family of origin.

This author agreed with Johnson and Buboltz's suggestion that a failure to differentiate from one's family of origin can lead to high levels of psychological reactance. It was logical to suppose that reactance may result from self-perceptions of being controlled by one's parents and responsible for them. Reactant individuals may be

unable to assert their own desires; rather they yield to the desires of their parents, or at least feel that they are. Johnson and Buboltz referred to this failure to act independently of one's parents' wishes as having low autonomy. This author wished to test the possibility that the low autonomous functioning demonstrated in this scenario may not have been the direct result of the experienced psychological reactance. Rather, in this study the author sought to investigate the possibility that these children did not develop a healthy sense of autonomy because of their enmeshed attachment to their parents. Thus the author proposed that low autonomy is a result of the insecure attachment and that autonomy mediates the relationship between attachment and reactance.

Brehm and Brehm (1981) discussed research suggesting that oppositional behavior among children is a healthy part of the development of autonomy. Pepper reported that a moderate degree of noncompliance is ideal in the development of autonomy. Dowd and Seibel (1990) further suggested that the optimal level of autonomy and sense of identity is achieved by having an optimal level of psychological reactance. Dowd (1993) wrote, " Without autonomy there is no identity and no reactance" (p. 133).

Dowd (1993) endorsed the notion that autonomy is developed through one's primary attachment figures providing a safe base from which to explore and unconditional acceptance. Harsh, manipulative, and inconsistent parenting techniques lead to higher levels of reactance. By the expression of psychological reactance they may feel that they are able to maintain autonomy. While this may help one give the appearance of autonomy, it is not likely to help one establish a true identity. In this case

the false identity established by the individual may actually be a counter identity to the person to which the individual is reacting, i.e. the attachment figure. Additionally, if parents are not supportive and do not form strong attachments with their children then those children may not develop a sense of autonomy nor are they likely to respond with high levels of psychological reactance. Therefore, without a secure attachment and the development of autonomy, one may respond with either high or low levels of reactance.

Seibel (1994) found that the QMPR and TRS were both related to the developmental factors of autonomy but not identity; therefore, she calls for more research to determine the development of reactance. Seibel (1994) found autonomy and interpersonal isolation to be positively correlated with psychological reactance, hypothesizing that high levels of reactance would indicate a disturbance in the process of separation and individuation process in which the individual feared being controlled by others, and that low levels of reactance would indicate a fear of separation. She also hypothesized that moderate levels of reactance would be optimal for healthy identity development but the expected curvilinear relationship did not exist.

Seibel's (1994) study confirmed the hypothesized positive relationship between autonomy and psychological reactance. Seibel called for research investigating the relationship between developmental factors and individual differences in psychological reactance because she suspected that the former may be responsible for her data's failure to support her hypothesis of a curvilinear relationship between reactance and identity development.

Summary of Attachment, Autonomy, and Psychological Reactance

Dowd (1993) stated that one's personal identity is dependent on the development of a flexible autonomy. An optimal level of reactance fosters autonomy. Without autonomy, identity and reactance are nonexistent. Autonomy is developed through an attachment to an unconditionally accepting attachment figure that serves as a secure base for support when necessary. When the attachment figure is overly critical, inconsistent with rewards and punishments, controls through coercion rather than reason, and frequently uses physical punishment, then that child is likely to experience higher levels of reactance later in life.

Reactance may enable one to maintain autonomy but will not be useful in helping one to establish his or her identity. In this case one may develop an identity that is not true, but rather is a reaction to the caregiver. Individuals who did not receive a secure base may develop high levels of reactance with a lack of a true identity.

A moderate level of psychological reactance is therefore necessary for a healthy sense of autonomy. It should be noted that this is true of cultures that value autonomy, independence, and a sense of personal control. This curvilinear relationship was supported by Dowd et al. (1991) in the development of the Therapeutic Reactance Scale.

Participants who have secure levels of attachment had a secure base and thus will have been allowed to develop an optimal sense of autonomy. It is logical that participants who possess this secure level of attachment and optimal sense of autonomy will also possess optimal levels of psychological reactance.

Individuals who have high levels of attachment and who do not develop a healthy sense of autonomy would be described as having enmeshed attachments, or a dependence on their attachment figures that does not foster autonomy. These individuals with enmeshed/high levels of attachment and low levels of autonomy would be predicted to have high levels of psychological reactance because of the lack of freedom from the control of, and dependency on, their attachment figures.

Individuals who have low levels of attachment, and thus who do not have a secure base from which to explore, may compensate by developing high levels of autonomy. This may be a reaction formation in that they do not truly feel autonomous but behave in such a way to reduce their feelings of insecurity. These individuals are assumed to have developed a false sense of autonomy, or a sense of autonomy without a true identity. Without a true identity or real sense of autonomy an optimal level of psychological reactance cannot develop. It follows that these individuals with low levels of attachment and high levels of autonomy would not have optimal levels of psychological reactance.

Some individuals who have low levels of attachment, and therefore no secure base from which to explore, may never develop a sense of autonomy. Without a sense of autonomy, they cannot assert their freedoms, and therefore will not develop an optimal sense of psychological reactance. They will likely feel powerless and will therefore helplessly give in to threats to their freedoms. It is possible that a recognition of a lack of ability to function autonomously may lead to defensiveness that results in unnecessary retaliation against all authority, and thus high levels of psychological reactance.

Therefore, individuals with low levels of attachment and low levels of autonomy could have either high or low levels of psychological reactance.

Hypotheses

A secure level of attachment to one's primary caregiver would be associated with the development of autonomy. If autonomy is defined as an ability to function independently or engage in free behaviors, then a threat to one's freedom (or autonomy) would likely result in psychological reactance. A healthy level of reactance would be expected to exist in individuals who value the autonomy that had been fostered by the secure attachment to one's caregiver.

The review of the literature lead to the following hypotheses.

Hypotheses IA, IB, and IC

Literature supported the concept that reactance is developmental in nature, especially as it relates to family dynamics. Therefore, it was hypothesized that level of psychological reactance would be associated with level of attachment (secure, anxious, avoidant). Hypotheses IA, IB, and IC were assessed with analysis of variance.

Hypothesis IA. Attachment (secure, anxious, avoidant) to mother would be associated with psychological reactance.

Hypothesis IB. Attachment to father (secure, anxious, avoidant) would be associated with psychological reactance.

Hypothesis IC. Attachment to peers (secure, anxious, avoidant) would be related to psychological reactance.

Hypotheses IIA, IIB, and IIC

To examine the influence and contribution of each aspect of attachment (trust, communication, alienation) on reactance multiple regression was used.

Hypothesis IIA. The three aspects of attachment to mother (trust, communication, alienation) would be significantly related and predict psychological reactance.

Hypothesis IIB. The three aspects of attachment to father (trust, communication, alienation) would be significantly related and predict psychological reactance.

Hypothesis IIC. The three aspects of Attachment to peers (trust, communication, alienation) would be significantly related and predict psychological reactance.

Hypothesis III

Attachment to one's primary care giver is said to foster healthy exploration, leading to successful interactions with one's environment and ultimately a sense of autonomy. Therefore, it was hypothesized that level of attachment (secure, anxious, avoidant) would be associated with level of autonomy. Hypotheses IIIA, IIIB, and IIIC were assessed with analysis of variance.

Hypothesis IIIA. Attachment to mother (secure, anxious, avoidant) would be related to autonomy.

Hypothesis IIIB. Attachment to father (secure, anxious, avoidant) would be related to autonomy.

Hypothesis IIIC. Attachment to peers (secure, anxious, avoidant) would be related to autonomy.

Hypothesis IV

To examine the influence and contribution of each aspect of attachment (trust, communication, alienation) on autonomy multiple regression was used.

Hypothesis IVA. The three aspects of attachment to mother (trust, communication, alienation) would be significantly related and predict autonomy.

Hypothesis IVB. The three aspects of attachment to father (trust, communication, alienation) would be significantly related and predict autonomy.

Hypothesis IVC. The three aspects of attachment to peers (trust, communication, alienation) would be significantly related and predict autonomy.

Hypothesis V

Secure levels of attachment to one's primary caregiver should lead to the development of autonomy. In order to maintain this autonomy it was hypothesized that one would develop an optimal sense of reactance, which was neither too high nor too low. The author used results obtained from the Therapeutic Reactance Scale to form the quasi-independent variables of high (> +1 SD), medium (between -1 and +1 SD), and low (< -1 SD) psychological reactance. Level of autonomy, as measured by The Adjective Checklist was used as the dependent variable. Analysis of variance was used to assess the statistical significance of differences between groups. Differences between groups were analyzed with Post-hoc tests.

Hypothesis V. Moderate levels of reactance would be associated with moderate levels of autonomy.

Hypothesis VI

Attachment is necessary to the development of autonomy. In order to maintain this autonomy, one needs to develop an optimal sense of psychological reactance. It was hypothesized that autonomy would moderate the relationship between attachment and psychological reactance for mothers, fathers, and peers. This relationship was assessed with hierarchical regression.

Hypothesis VIA. Autonomy would moderate the relationship between attachment to mother and reactance.

Hypothesis VIB. Autonomy would moderate the relationship between attachment to father and reactance.

Hypothesis VIC. Autonomy would moderate the relationship between attachment to peers and reactance.

CHAPTER 2

Method

The present study sought to investigate the relationships among psychological reactance, attachment and autonomy. Statistical analyses were used to determine the impact of attachment and autonomy on psychological reactance. This study used the Therapeutic Reactance Scale (TRS; Dowd et al., 1991) to measure psychological reactance, The Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) to measure attachment, The Adjective Checklist (ACL; Gough & Heilbrun, 1983) to measure autonomy, and a demographic questionnaire. The interrelationships among reactance, attachment, and autonomy were examined.

Participants

Participants included 415 students between the ages of 17 and 72, with a mean age of 20.78 and a median age of 19. The participants included 166 males (40%) and 244 females (58.85). Five participants did not provide an answer to the question of gender. The sample was comprised of the ethnic groups available from the Introductory Psychology subject pool and included 324 individuals (78.1%) identifying themselves as Caucasian, 69 individuals (16.6%) identifying themselves as African American, 10 individuals (2.4%) identifying themselves as other, and eight individuals (1.9%) identifying themselves as Latino. Four individuals did not provide an answer to the

question about race. The sample of participants was undergraduate students, 254 (61.2%) were freshmen, 103 (24.8%) were sophomores, 35 (8.4%) were juniors, and 16 (3.9%) were seniors. Seven students (1.6%) did not provide an answer to the question of college status.

All participants were enrolled in Introductory Psychology and participating in the subject pool at a small southern university. Participation in the study was voluntary and a high degree of anonymity was maintained. Participants were treated in accordance with the ethical guidelines established in the American Psychological Association's *Ethical Principles of Psychologists* (1992). Permission for student participation was obtained from the Institutional Review Boards of Southeastern Louisiana University and Louisiana Tech University. See Table 1 for a detailed summary of the demographic characteristics for the total sample.

Instruments

Therapeutic Reactance Scale. The Therapeutic Reactance Scale (Dowd et al., 1991) was used to operationalize the concept of psychological reactance in this study. The Therapeutic Reactance Scale (TRS) was developed not only to study psychological reactance, but also to test the generalizability of the QMPR. The TRS is comprised of 28-item Likert Scale items requiring a response of Strongly Disagree, Disagree, Agree, and Strongly Agree for each item creating a minimum score of 28 and a maximum score of 112.

Table 1

Demographics

	Total Sample		Males Only		Females Only	
Characteristic	F	%	F	%	F	%
Gender						
Males	166	40%	166	100%	0	0%
Females	244	58.8%	0	0%	244	100%
Ethnicity						
African American	69	16.6%	19	11.4%	49	20.1%
Caucasian	324	78.1%	140	84.3%	184	75.4%
Latino	8	1.9%	1	.6%	7	2.9%
Other	10	2.4%	6	3.6%	4	1.6%
College Status						
Freshman	254	61.2%	103	62%	151	61.9%
Sophomore	103	24.8%	41	24.7%	62	25.4%
Junior	35	8.4%	16	9.6%	18	7.4%
Senior	16	3.9%	4	2.4%	12	4.9%

Note. F = Frequency, % = Percent

The development of the Therapeutic Reactance Scale involved two administrations of a set of 112 items to 130 undergraduate educational psychology students from a large university in the Midwestern United States. Eighty items were excluded as the correlations between these individual items and the total test score were very low (less than .30). Factor analysis involving an oblique rotation eliminated four more items due to insufficient factor loadings (less than .35). In the final analysis of the 28 remaining items, two factors were retained and identified as subscales. The Verbal Reactance Subscale and the Behavioral Reactance Subscale of the TRS correlate at .37.

Initial examination of a three-week test-retest reliability of the TRS ranged from .57 to .60. Lukin, Dowd, Plake, and Kraft (1985) reported a one week test-retest reliability for the TRS of .76. Dowd et al. (1991) indicated that the internal consistency measures of the Therapeutic Reactance Scale range from .75 to .84.

A norming group of 211 educational psychology students from a large midwestern university produced data approximating a normal distribution. The mean for the Total Score on the Therapeutic Reactance Scale was 66.68, and the standard deviation was 6.59. A second administration of the TRS (Dowd et al., 1991) on an additional sample of 150 introductory psychology students at a large midwestern university produced very similar results as the mean for the sample was 68.87 and the standard deviation was 7.19. Due to the limited number of validity studies for the subscales Dowd et al. (1991) suggested using the Therapeutic Reactance Scale Total Score.

A sample of an item on the TRS is, "I resent authority figures who try to tell me what to do." Participants answer on a four point Likert Scale and the sum of the points endorsed yields possible total scores ranging from 28 to 112. Eight of the items are reverse scored.

Total Reactance scores were used to divide participants into three groups for data analysis. Assignment to groups was as follows; greater than one standard deviation above the mean was classified as high reactance, less than one standard deviation below the mean was classified as low reactance, and scores within one standard deviation of the mean were classified as moderate or optimal reactance. This method of classification was chosen over dividing participants into equal thirds based on their scores in order to achieve groups with distinctively high and low reactance scores.

Inventory of Parent and Peer Attachment. Lyddon, Bradford, and Nelson (1993) have reviewed self-report measures of attachment and have given suggestions for the best instruments depending on the question to be answered. To look at the relationship between attachment and reactance in college students it is the opinion of this author that the instrument best suited to meet this need was the Inventory of Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987). The IPPA is a self-report measure with a five point Likert Scale response format assessing the quality of parent and peer attachments of late adolescents and young adults. It allows for participants to be from both intact and divorced families by allowing them to respond to the items for the parent

who they feel has most influenced them if they have a different relationship with their mother and father.

The Inventory of Parent and Peer Attachment (IPPA) was developed by Armsden and Greenberg (1987) to assess adolescents' perceptions of the positive and negative affective/cognitive dimensions of relationships with their parents and close friends, specifically, how well these figures serve as sources of psychological security. There are 25 items in each of the mother, father, and peer sections, yielding three attachment scores. For the IPPA internal reliabilities (Chronbach's alpha) are: Mother attachment, .87; Father attachment, .89; Peer attachment, .92. The IPPA is scored by reverse-scoring the negatively worded items and then summing the response values in each section.

Three broad dimensions of attachment are assessed: degree of mutual trust; quality of communication; and extent of anger and alienation. Trust is measured by 10 items on each of the parent scales and 10 items on the peer scale. Examples of items measuring trust are "My mother/father respects my feelings" and "My friends accept me as I am." Communication is measured by nine items on each of the parent subscales and 8 items on the peer scale. Example items measuring communication are "I like to get my mother/father's point of view on things I'm concerned about" and "My friends encourage me to talk about my difficulties." There are six items in each of the parent subscales and seven items on the peer subscale to measure Alienation. Examples of items that measure alienation are "I don't get much attention from my mother/father" and "My friends don't understand what I'm going through these days."

Late adolescents' parental attachment scores were moderately to highly correlated with Family and Social Self scores on the Tennessee Self Concept Scale and with most of the subscales on the Family Environmental Scale (Armsden & Greenberg, 1987). In a population of 10 to16-year-old psychiatric patients, less secure parent attachment was related to clinical diagnoses of depression, as well as parents' ratings of their teens' depression and teens' self reports of depression (Armsden, McCauley, Grenberg, Burke, & Mitchell, 1991).

Parent and peer attachment, as measured with the IPPA, have also been found to be correlated with personality variables such as positive and stable self-esteem, life-satisfaction, depression, anxiety, resentment/alienation, covert anger, and loneliness among late adolescents (Armsden & Greenberg, 1987).

The Adjective Checklist. The Adjective Checklist (SCL) was developed by Harrison Gough at the Institute of Personality Assessment and Research in Berkeley in 1949, was first published in 1965, and was revised in 1980 by Gough and Alfred Heilbrun. The ACL was initially designed as an instrument to be used by observers in describing others but is now used as a personality test that relies on self description. The ACL allows the individual to select salient adjectives reflecting personality characteristics or attributes, and the selection of one descriptor does not influence subsequent selections. The ACL is composed of 300 items and includes 37 separate scales for interpretation.

The ACL was originally composed of 125 adjectives from Cattell's list of 171 traits obtained from factorial studies. From its origination in 1949 to its the final version of 1952, 176 adjectives were added and one was dropped for a total 300 items. Scales were soon added either empirically by correlating items with non-test criteria or in a rational manner. The autonomy subscale was created in a rational manner by grouping adjectives into clusters according to their inferred psychological meaning. The ACL defines autonomy as "to act independently of others or of social values and expectations" (Gough & Heilbrun, 1983).

The ACL was normed on samples of 5,238 males and 4,144 females. The sample was drawn from the following subgroups: high school students, college students, graduate students, medical students, law students, delinquents, psychiatric patients, and adults. The groups were highly diversified in age, education, occupation, intelligence, and social status.

Internal Consistency was calculated on a sample of 591 males and 588 females. For males the coefficients for the 37 subscales ranged from .56 for Change and for Succorance to .95 for Favorable, with a median of .75. For the Autonomy subscale, the alpha coefficient for internal consistency was .69 for males and .68 for females.

Test-retest correlations were derived from a sample of 199 males after a 6-month interval. Test-retest correlations were highest for the Aggression Scale (.77) and lowest for the High Origence-Low Intelligence Scale (.34), with a median of .65. Test-retest correlations from a sample of 45 females after one year ranged from .45 for Femininity,

A-1 (high origence, low intelligence), and A-2 (high origence, high intelligence) to .86 for Exihibition. The median was .71. Test-retest coefficients for the autonomy scale are .75 for males and .77 for females.

According to Gough and Heilbrun (1983) reliability over time on the ACL appears to be a meaningful psychological variable. Respondents of a cheerful, outgoing, and active temperament will tend to give more similar reports over time, whereas more conventional, subdued, and phlegmatic respondents will tend to be less consistent in their self reports.

The total number of items checked was counted then participants were categorized into five groups for scoring based on the total number of adjectives endorsed. Participants endorsing 0-54 items were assigned to group A, 55-78 items to group B, 79-116 items to group C, 117-140 to group D, and 141-300 to group E. Using the scoring manual for The Adjective Checklist raw scores were converted to standard Scores based on the group to which the participant was assigned. Participants endorsing less than 20 or more than 250 items were eliminated from the study for invalid protocols.

There are 29 items that are indicative of Autonomy and 15 items that are Contraindicative. The indicative items are: adventurous, aggressive, aloof, argumentative, arrogant, assertive, autocratic, confident, cynical, dissatisfied, egotistical, fault-finding, frank, hard-headed, headstrong, hostile, independent, indifferent, individualistic, irresponsible, opinionated, outspoken, rebellious, self-centered, self-confident, tactless, unconventional, undependable, and uninhibited. The contraindicative items are: cautious,

conventional, cooperative, dependable, dependent, meek, moderate, obliging, self-denying, spineless, submissive, suggestible, tactful, timid, and tolerant.

The participants were given a score on the autonomy scale that ranged from -15 to 29 based on the number of indicative and contraindicative items endorsed. This raw score was converted to a standard Score based on the group assignment and gender. Standard scores greater than 60 indicated high levels of autonomy and scores less than 40 indicated low levels of autonomy, based on the standard scores having a mean of 50 and standard deviation of 10.

Procedure

Participants read and signed an informed consent form that explained the purpose of the study and ensured them of their confidentiality as well as the voluntary nature of their participation. The questionnaires were then administered to those participants who had given their informed consent. The questionnaires were all composed of the same instruments; however, the instruments were presented in different orders so as to control for possible order effects. The research was conducted individually and in small groups. A short instructional paragraph was provided with each questionnaire.

Data Analysis

Collected data were analyzed to determine the relationships among psychological reactance, attachment, and autonomy. Data were analyzed to determine the relationships between attachment and reactance, attachment and autonomy, levels of autonomy and attachment necessary to result in optimal levels of reactance, and whether autonomy

moderated the relationship between attachment and reactance. Gender differences were tested first. Significant gender differences did exist for several of the variables including one subscale for attachment to mother, all three subscales for attachment to peers, and reactance. Therefore, males and females were analyzed separately.

Analysis of variance (ANOVA), multiple regression, and hierarchical regression were used to examine the collected data. ANOVA is a statistical technique used to simultaneously examine the relationships among several categorical independent variables and one dependent variable. Multiple regression is used to look at unique variance accounted for by factors that should be related to the dependent variable. Hierarchical regression is used to assess effects of predictor variables on the criterion variable, as well as to examine the potential interaction effects of predictor variables on the criterion variable. An alpha level of .05 was used in all analyses to determine significance.

Hypotheses IA, IB, and IC

Hypotheses IA, IB, and IC were tested using analysis of variance.

Hypothesis IA. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained. The three subscale scores were continuous data that were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for mother was used as the quasi-independent variable. Results

obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

Hypothesis IB. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained. The three subscale scores were continuous data that were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for father was used as the quasi-independent variable. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

Hypothesis IC. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained. The three subscale scores were continuous data that were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for peers were used as the quasi-independent variable. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

Hypotheses IIA, IIB, and IIC

Hypotheses IIA, IIB, and IIC were tested using three separate multiple regressions – one for mothers, one for fathers, and one for peers.

Hypothesis IIA. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were

obtained and used as the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

Hypothesis IIB. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained and used as the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

Hypothesis IIC. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained and used as the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

Hypotheses IIIA, IIIB, and IIIC

Hypotheses IIIA, IIIB, and IIIC were tested using analysis of variance.

Hypothesis IIIA. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained. The three subscale scores were continuous data that were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for mother was used as the quasi-independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

Hypothesis IIIB. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were

obtained. The three subscale scores were continuous data that were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for father was used as the quasi-independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

Hypothesis IIIC. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained. The three subscale scores were continuous data that were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for peers as used as the quasi-independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

Hypotheses IVA, IVB, and IVC

Hypotheses IVA, IVB, and IVC were tested using multiple regression.

Hypothesis IVA. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained and used as the predictor variables. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

Hypothesis IVB. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were

obtained and used as the predictor variables. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

Hypothesis IVC. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, and alienation) were obtained and used as the predictor variables. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

Hypothesis V

Results obtained from The Therapeutic Reactance Scale were used to form the quasi-independent variables of high (> +1 SD), medium (between -1 and +1 SD), and low (< -1 SD) psychological reactance. Level of autonomy, as measured by The Adjective Checklist was used as the dependent variable. Analysis of variance was used to assess the statistical significance of differences between groups. Differences between groups were analyzed with post-hoc tests.

Hypothesis VIA, VIB, and VIC

Hypothesis VIA. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effect of attachment to mother was blocked against the components of psychological reactance. Next, autonomy was blocked against the components of psychological reactance. Last, the interactions between attachment and autonomy were entered. Interactions that added significant incremental variance would have indicated that the autonomy construct would have moderated the effects of attachment to father on psychological reactance. Prior to regression analysis,

intercorrelations of attachment to mother and autonomy were examined to ensure that problems of multicollinearity were not present.

Hypothesis VIB. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effects of attachment to father were blocked against the components of psychological reactance. Next, autonomy was blocked against the components of psychological reactance. Last, the interactions between attachment and autonomy were entered. Interactions that added significant incremental variance would indicate that the autonomy construct moderated the effects of attachment to father on psychological reactance. Prior to regression analysis, intercorrelations of attachment to father and autonomy were examined to ensure that problems of multicollinearity were not present.

Hypothesis VIC. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effects of attachment to peers were blocked against the components of psychological reactance. Next, autonomy was blocked against the components of psychological reactance. Last, the interactions between attachment and autonomy were entered. Interactions that added significant incremental variance would indicate that the autonomy construct moderated the effects of attachment to father on psychological reactance. Prior to regression analysis, intercorrelations of attachment to peers and autonomy were examined to ensure that problems of multicollinearity were not present.

CHAPTER 3

Results

Data Analysis

Data were analyzed to test the hypotheses about the relationships between attachment and reactance, attachment and autonomy, and whether autonomy moderated the relationship between attachment and reactance. Gender differences were assessed first. Significant gender differences did exist for several of the variables, including one subscale for attachment to mother, all three subscales for attachment to peers, and reactance. See Table 2 for gender differences. Because of the significant gender differences found on several important variables, males and females were analyzed separately.

Gender Differences

There was a 5.05 point difference between the mean total reactance score for males (72.14) and the mean total reactance score for females (67.09). This significant difference ($t = 6.307$, $p < .000$) indicated that on average, the males were more reactant than the females in this sample. There was a significant ($t = 6.084$, $p < .000$) difference of 5.59 points between the mean total attachment to peers score for males (47.24) and the mean total attachment to peers score for females (52.82), which indicated that for this sample females reported stronger attachments to their peers than did males.

Table 2

Gender Differences

	Mean				
Variable	Males	Females	*t*	*df*	*p*
Mother Trust	37.07	36.60	.620	404	.536
Mother Communication	32.09	33.77	-1.992	404	.047*
Mother Alienation	22.44	22.18	.508	401	.612
Mother Total Attachment	46.70	48.28	-1.315	396	.189
Father Trust	38.98	38.01	.986	389	.325
Father Communication	28.63	27.67	1.005	389	.316
Father Alienation	21.06	20.51	.988	389	.324
Father Total Attachment	46.71	44.99	1.163	378	.246
Peers Trust	42.27	44.70	-4.041	397	.000**
Peers Communication	30.61	34.78	-7.932	403	.000**
Peers Alienation	25.79	26.91	-2.667	401	.008**
Peers Total Attachment	47.24	52.82	-6.084	390	.000**
Verbal Reactance	31.52	30.09	3.962	399	.000**
Behavioral Reactance	40.50	36.94	6.351	390	.000**
Total Reactance	72.14	67.09	6.307	384	.000**
Autonomy	52.00	51.92	.097	406	.923

Note. t = t-test, df = degrees of freedom, p = probability 2 tailed.

* = $p < .05$, ** = $p < .01$

Descriptives

Males reported approximately equal mean attachment scores to mothers (46.70) and fathers (46.71) but females reported slightly higher mean attachments to mothers (48.28) than to fathers (44.99). Males mean attachment score to peers (47.24) and females mean attachment score to peers (52.82) were both larger than their attachments to

Table 3

Means and Standard Deviations for Variables

	Males		Females	
Variables	*M*	*SD*	*M*	*SD*
Verbal Reactance	31.52	3.74	30.09	3.40
Behavioral Reactance	40.50	5.53	36.94	5.42
Total Reactance	72.14	8.04	67.09	7.52
Autonomy	52.00	7.88	51.92	8.04
Mother Trust	37.07	6.66	36.60	8.01
Mother Communication	32.09	7.67	33.77	8.74
Mother Alienation	22.45	4.65	22.18	5.42
Mother Total Attachment	46.70	11.07	48.28	12.25
Father Trust	38.98	8.19	38.01	10.29
Father Communication	28.63	8.34	27.67	9.75
Father Alienation	21.06	5.02	20.51	5.64
Father Total Attachment	46.71	12.56	44.99	15.07
Peers Trust	42.27	5.68	44.70	6.04
Peers Communication	30.62	5.51	34.78	4.94
Peers Alienation	25.79	4.04	26.91	4.18
Peers Total Attachment	47.24	9.02	52.82	8.88
Age	20.48	4.60	20.98	6.50

Note. M = Mean and SD = Standard Deviation.

either parent. See Table 3 for a summary of descriptive statistics, including means and standard deviations, for all variables and subscales.

Correlations Among Variables

Among males there was a significant correlation ($r = .208$, $p < .05$) between total attachment to mother and total attachment to father. There was also a significant correlation ($r = .186$, $p < .05$) between total attachment to father and total attachment to

peers. However, the correlation between total attachment to mother and total attachment to peers was not significant ($r = .146, p = .068$). There was a significant correlation ($r = .492, p < .01$) between reactance and autonomy. A correlation matrix of all variables for males is provided in Table 4.

Among females there was a significant correlation ($r = .319, p < .01$) between total attachment to mother and total attachment to father. There was also a significant correlation ($r = .255, p < .01$) between total attachment to mother and total attachment to peers. The correlation between total attachment to father and total attachment to peers was not significant ($r = .096, p = .160$). There was a significant correlation ($r = .338, p < .01$) between reactance and autonomy. A correlation matrix of all variables for females is provided in Table 5.

Analysis of variance (ANOVA), multiple regression, and hierarchical regression were used to test the hypotheses. An alpha level of .05 was used in all analyses to determine significance.

Results for Hypothesis 1A for Males.

It was predicted that attachment style to mother would be related to reactance. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The formula used required that each

Table 4

Correlations for Males

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age		-.03	-.12	.00	-.10	-.07	-.02	-.04	-.05	-.08	.06	-.00	-.01	.04	.01
2. M Trust			.72**	.61**	.85**	.09	.12	.08	.10	.25**	.17*	.30**	.13	-.05	-.18*
3. M Communication				.54**	.90**	.13	.27**	.12	.22**	.14	.13	.21**	.08	-.03	-.17*
4. M Alienation					.32**	.05	.13*	.33**	.01	.21**	.10	.51**	-.04	-.01	-.20**
5. M Total Attachment						.12	.19*	-.01	.21*	.16*	.15	.11	.15	-.05	-.13
6. F Trust							.78**	.65**	.90**	.21**	.12	.13	.14	-.12	-.24**
7. F Communication								.63**	.90**	.21**	.15	.17*	.14	-.01	-.19*
8. F Alienation									.43**	.23**	.07	.41**	-.00	-.08	-.30**
9. F Total Attachment										.18*	.15	.03	.19*	-.09	-.18*
10. P Trust											.79**	.60**	.84**	.05	-.21**
11. P Communication												.42**	.91**	-.02	-.20*
12. P Alienation													.18*	.10	-.21**
13. P Total Attachment														-.03	-.16*
14. Verbal Reactance															.50**
15. Behavioral Reactance															
16. Total Reactance															
17. Autonomy															

Table 4

Correlations for Males

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age		-.03	-.12	.00	-.10	-.07	-.02	-.04	-.05	-.08	.06	-.00	-.01	.04	.01
2. M Trust			.72**	.61**	.85**	.09	.12	.08	.10	.25**	.17*	.30**	.13	-.05	-.18*
3. M Communication				.54**	.90**	.13	.27**	.12	.22**	.14	.13	.21**	.08	-.03	-.17*
4. M Alienation					.32**	.05	.13*	.33**	.01	.21**	.10	.51**	-.04	-.01	-.20**
5. M Total Attachment						.12	.19*	-.01	.21*	.16*	.15	.11	.15	-.05	-.13
6. F Trust							.78**	.65**	.90**	.21**	.12	.13	.14	-.12	-.24**
7. F Communication								.63**	.90**	.21**	.15	.17*	.14	-.01	-.19*
8. F Alienation									.43**	.23**	.07	.41**	-.00	-.08	-.30**
9. F Total Attachment										.18*	.15	.03	.19*	-.09	-.18*
10. P Trust											.79**	.60**	.84**	.05	-.21**
11. P Communication												.42**	.91**	-.02	-.20*
12. P Alienation													.18*	.10	-.21**
13. P Total Attachment														-.03	-.16*
14. Verbal Reactance															.50**
15. Behavioral Reactance															
16. Total Reactance															
17. Autonomy															

Table 4

Correlations for Males

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age	—	-.03	-.12	.00	-.10	-.07	-.02	-.04	-.05	-.08	.06	-.00	-.01	.04	.01
2. M Trust		—	.72**	.61**	.85**	.09	.12	.08	.10	.25**	.17*	.30**	.13	-.05	-.18*
3. M Communication			—	.54**	.90**	.13	.27**	.12	.22**	.14	.13	.21**	.08	-.03	-.17*
4. M Alienation				—	.32**	.05	.13*	.33**	.01	.21**	.10	.51**	-.04	-.01	-.20**
5. M Total Attachment					—	.12	.19*	-.01	.21*	.16*	.15	.11	.15	-.05	-.13
6. F Trust						—	.78**	.65**	.90**	.21**	.12	.13	.14	-.12	-.24**
7. F Communication							—	.63**	.90**	.21**	.15	.17*	.14	-.01	-.19*
8. F Alienation								—	.43**	.23**	.07	.41**	-.00	-.08	-.30**
9. F Total Attachment									—	.18*	.15	.03	.19*	-.09	-.18*
10. P Trust										—	.79**	.60**	.84**	.05	-.21**
11. P Communication											—	.42**	.91**	-.02	-.20*
12. P Alienation												—	.18*	.10	-.21**
13. P Total Attachment													—	-.03	-.16*
14. Verbal Reactance														—	.50**
15. Behavioral Reactance															—
16. Total Reactance															
17. Autonomy															

Table 4 (continued)

Correlations for Males

Variable	16	17
1. Age	.02	.06
2. M Trust	-.15	-.12
3. M Communication	-.14	-.08
4. M Alienation	-.16*	-.16*
5. M Total Attachment	-.12	-.06
6. F Trust	-.23**	-.15
7. F Communication	-.16*	-.11
8. F Alienation	-.25**	-.15
9. F Total Attachment	-.17*	-.13
10. P Trust	-.14	-.05
11. P Communication	-.16*	-.04
12. P Alienation	-.11	-.02
13. P Total Attachment	-.14	-.03
14. Verbal Reactance	.80**	.37**
15. Behavioral Reactance	.92**	.47**
16. Total Reactance	---	.49**
17. Autonomy		---

Note. * = $p < .05$, ** = $p < .01$

M = Mother, F = Father, P = Peers.

subscale be divided into equal thirds and labeled low, medium, and high. The participants who met the requirements for secure, i.e. having each subscale be classified as low, medium, or high, according to the guidelines, were classified as such. The overall attachment rating for mother was used as the quasi-independent variable. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

The ANOVA with attachment style with mother as the independent variable and reactance as the dependent variable was not significant, $F(2, 53) = .009$, $p = .991$. Hypothesis IA for males was not supported. See Table 6 for a more detailed summary of the analysis.

Results for Hypothesis IA for Females.

It was predicted that attachment style to mother would be related to reactance. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for mother was used as the independent variable. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

The ANOVA with attachment style with mother as the independent variable and reactance as the dependent variable was not significant, $F(2, 79) = .047$, $p = .954$.

Table 6

Hypotheses IA, IB, and IC for Males and Females:

ANOVAs for Attachment and Reactance

Source	*df*	M^2	*F*	*p*
Males				
Mother	2	.527	.009	.991
(within)	53	57.848		
Father	2	125.413	2.227	.115
(within)	72	56.303		
Peers	1	32.577	.631	.432
(within)	37	51.635		
Females				
Mother	2	2.451	.047	.954
(within)	79	51.852		
Father	2	3.793	.060	.942
(within)	96	63.213		
Peers	1	65.695	1.293	.265
(within)	27	50.806		

Note. df = degrees of freedom, M^2 = mean squared, *F*= F value, *p* = significance level.

Hypothesis IA for females was not supported. See Table 6 for a more detailed summary of the analysis. The expectation that for females secure attachment to mother would be related to optimal levels of reactance was not confirmed.

Results for Hypothesis IB for Males.

It was predicted that attachment style to father would be related to reactance. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for father was used as the independent variable. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

The ANOVA with attachment style with father as the independent variable and reactance as the dependent variable was not significant, F (2, 72) = 2.227, p = .115. Hypothesis IB for males was not supported. See Table 6 for a more detailed summary of the analysis. The expectation that for males secure attachment to father would be related to optimal levels of reactance was not confirmed.

Results for Hypothesis IB for Females.

It was predicted that attachment style to father would be related to reactance. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three

subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for father was used as the independent variable. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

The ANOVA with attachment style with father as the independent variable and reactance as the dependent variable was not significant, F (2, 96) = .060, p = .942. Hypothesis IB for females was not supported. Table 6 provides for a more detailed summary of the analysis. The expectation that for females secure attachment to father would be related to optimal levels of reactance was not confirmed.

Results for Hypothesis IC for Males.

It was predicted that attachment style to peers would be related to reactance. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for peers was used as the quasi-independent variable. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

The ANOVA with attachment style with peers as the independent variable and reactance as the dependent variable was not significant, F (1, 37) = .631, p = .432.

Hypothesis IC for males was not supported. See Table 6 for a more detailed summary of the analysis. The expectation that for males secure attachment to peers would be related to optimal levels of reactance was not confirmed.

Results for Hypothesis IC for Females.

It was predicted that attachment style to peers would be related to reactance. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for peers was used as the independent variable. Results obtained from The Therapeutic Reactance Scale were used to form the dependent variable.

The ANOVA with attachment style with peers as the independent variable and reactance as the dependent variable was not significant, $F(1, 27) = 1.293$, $p = .265$. Hypothesis IC with females was not supported. See Table 6 for a more detailed summary of the analysis. The expectation that for females secure attachment to peers would be related to optimal levels of reactance was not confirmed.

Results for Hypothesis IIA for Males.

It was hypothesized that level of attachment to mother would be related to level of reactance. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained

and used as the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the criterion variable.

The regression analysis with the attachment with mother subscales entered as the predictor variables and reactance as the criterion variable was not significant, F (3, 150) = 1.590, p = .194. Hypothesis IIA for males was not supported. The prediction that for males level of attachment to mother would be related to level of reactance was not confirmed. See Table 7 for a detailed summary of the analysis.

Results for Hypothesis IIA for Females.

It was hypothesized that level of attachment to mother would be related to level of reactance. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained and used as the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the criterion variable.

The regression analysis with the attachment with mother subscales entered as the predictor variables and reactance as the criterion variable was not significant, F (3, 217) = .901, p = .442. Hypothesis IIA for females was not supported. The prediction that for females level of attachment to mother would be related to level of reactance was not confirmed. See Table 7 for a detailed summary of the analysis.

Results for Hypothesis IIB for Males.

It was hypothesized that level of attachment to father would be related to level of reactance. Attachment to father was assessed using the Inventory for Parent and Peer

Table 7

Hypothesis IIA, IIB, and IIC for Males and Females:

Relationship between Attachment and Reactance

Variable	*B*	*SE B*	*β*	*p*
Males				
Mothers				
Trust	-7.434	.149	- .061	.619
Communication	-3.749	.121	- .036	.758
Alienation	- .177	1.770	-1.040	.317
Fathers				
Trust	- .156	.137	- .156	.225
Communication	5.497	.135	.054	.688
Alienation	- .268	.182	- .169	.144
Peers				
Trust	1.280	.214	.009	.952
Communication	- .228	.195	- .152	.245
Alienation	- .112	.202	- .055	.581
Females				
Mothers				
Trust	-3.812	.140	- .041	.786
Communication	-1.092	.121	- .013	.928
Alienation	-8.806	.161	- .064	.585
Fathers				
Trust	- .118	.089	- .159	.190
Communication	7.184	.098	.092	.464
Alienation	- .134	.042	- .101	.345
Peers				
Trust	1.509	.168	.011	.928
Communication	- .100	.179	- .064	.575
Alienation	- .153	.150	- .086	.307

Note. *B* = Unstandardized beta weight, *SE B* = standard error of unstandardized beta weight. *β* = standardized beta weight.

Attachment. Three subscale scores (trust, communication, alienation) were obtained and used as the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the criterion variable.

The regression analysis with the attachment with father subscales entered as the predictor variables and reactance as the criterion variable was significant, $F(3, 141) = 3.314$, $p = .002$. See Table 7 for a summary of the regression analysis. Hypothesis IIB for males was supported. The prediction that for males level of attachment to father would be related to level of reactance was confirmed.

Results for Hypothesis IIB for Females.

It was hypothesized that level of attachment to father would be related to level of reactance. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the criterion variable.

The regression analysis with the attachment with father subscales entered as the predictor variables and reactance as the criterion variable was not significant, $F(3, 211) = 2.156$, $p = .094$. Hypothesis IIB for females was not supported. The prediction that for females level of attachment to father would be related to level of reactance was not confirmed. See Table 7 for a detailed summary of the analysis.

Results for Hypothesis IIC for Males.

It was hypothesized that level of attachment to peers would be related to level of reactance. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the criterion variable.

The regression analysis with the attachment with peers subscales entered as the predictor variables and reactance as the criterion variable was not significant, F (3, 148) = 1.583, p = .196. Hypothesis IIC for males was not supported. The prediction that for males level of attachment to peers would be related to level of reactance was not confirmed. See Table 7 for a detailed summary of the analysis.

Results for Hypothesis IIC for Females.

It was hypothesized that level of attachment to peers would be related to level of reactance. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were the predictor variables. Results obtained from The Therapeutic Reactance Scale were used to form the criterion variable.

The regression analysis with the attachment with peers subscales entered as the predictor variables and reactance as the criterion variable was not significant, F (3, 212) = 1.033, p = .379. Hypothesis IIC for females was not supported. The prediction that for

females level of attachment to peers would be related to optimal level of reactance was not confirmed. See Table 7 for a detailed summary of the analysis.

Results of Hypothesis IIIA for Males.

It was predicted that attachment style to mother would be related to autonomy. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for mothers was used as the independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

The ANOVA with attachment style with mother as the independent variable and autonomy as the dependent variable was not significant, $F(2, 58) = .069, p = .934$. See Table 8 for a summary of the analysis. Hypothesis IIIA for males was not supported. The expectation that for males secure attachment to mother would be related to moderate levels of autonomy was not confirmed.

Results for Hypothesis IIIA for Females.

It was predicted that attachment style to mother would be related to autonomy. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high

Table 8

Hypotheses IIIA, IIIB, and IIIC for Males and Females:

ANOVAs for Attachment and Autonomy

Source	*df*	M^2	*F*	*p*
Males				
Mother	2	2.909	.069	.934
(within)	58	42.378		
Father	2	67.072	1.269	.287
(within)	76	52.861		
Peers	1	8.375	.246	.623
(within)	41	34.112		
Females				
Mother	2	65.612	.801	.452
(within)	84	81.887		
Father	2	15.079	.210	.811
(within)	101	71.755		
Peers	2	143.321	1.626	.214
(within)	29	88.123		

Note. *df* = degrees of freedom, M^2 = mean squared, *F* = F value, *p* = significance level.

groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for mothers was used as the independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

The ANOVA with attachment style with mother as the independent variable and autonomy as the dependent variable was not significant, $F(2, 84) = .801$, $p = .452$. See Table 8 for a summary of the analysis. Hypothesis IIIA for females was not supported. The expectation that for females secure attachment to mother would be related to moderate levels of autonomy was not confirmed.

Results for Hypothesis IIIB for Males.

It was predicted that attachment style to father would be related to autonomy. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for fathers was used as the independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

The ANOVA with attachment style with father as the independent variable and autonomy as the dependent variable was not significant, $F(2, 76) = 1.269$, $p = .287$. See Table 8 for a summary of the analysis. Hypothesis IIIB for males was not supported. The

expectation that for males secure attachment to father would be related to moderate levels of autonomy was not confirmed.

Results for Hypothesis IIIB for Females.

It was predicted that attachment style to father would be related to autonomy. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for fathers was used as the independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

The ANOVA with attachment style with father as the independent variable and autonomy as the dependent variable was not significant, F (2, 101) = .210, p = .811. See Table 8 for a summary of the analysis. Hypothesis IIIB for females was not supported. The expectation that for females secure attachment to father would be related to moderate levels of autonomy was not confirmed.

Results for Hypothesis IIIC for Males.

It was predicted that attachment style to peers would be related to autonomy. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high

groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for peers was used as the quasi-independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

The ANOVA with attachment style with peers as the independent variable and autonomy as the dependent variable was not significant, $F(1, 41) = .246$, $p = .623$. See Table 8 for a summary of the analysis. Hypothesis IIIC for males was not supported. The expectation that for males secure attachment to peers would be related to moderate levels of autonomy was not confirmed.

Results for Hypothesis IIIC for Females.

It was predicted that attachment style to peers would be related to autonomy. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained. The three subscale scores, that were continuous data, were categorized into low, medium, or high groups. A formula was used to obtain an overall rating of secure, ambivalent, or avoidant attachment based on the three subscale scores. The overall attachment rating for peers was used as the independent variable. The dependent variable was level of autonomy, as measured by The Adjective Checklist.

The ANOVA with attachment style with peers as the independent variable and autonomy as the dependent variable was not significant, $F(2, 29) = 1.626$, $p = .214$. See Table 8 for a summary of the analysis. Hypothesis IIIC for females was not supported.

The expectation that for females secure attachment to peers would be related to moderate levels of autonomy was not confirmed.

Results for Hypothesis IVA for Males.

It was hypothesized that level of attachment to mother would be related to level of autonomy. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained and used as the predictor variables. The criterion variable was level of autonomy, as measured by The Adjective Checklist.

The regression analysis with the attachment with mother subscales entered as the predictor variables and autonomy as the criterion variable was not significant, $F(3, 157) = 1.409$, $p = .242$. See Table 9 for a summary of the analysis. Hypothesis IVA for males was not supported. The prediction that for males level of attachment to mother would be related to level of reactance was not confirmed.

Results for Hypothesis IVA for Females.

It was hypothesized that level of attachment to mother would be related to level of autonomy. Attachment to mother was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained and used as the predictor variables. The criterion variable was level of autonomy, as measured by The Adjective Checklist.

Table 9

Hypothesis IVA, IVB, and IVC for Males and Females:

Relationship between Attachment and Autonomy

Variable	*B*	*SE B*	*β*	*p*
Males				
Mothers				
Trust	-7.038	.144	-.060	.626
Communication	4.135	.119	-.040	.728
Alienation	- .241	.171	.143	.160
Fathers				
Trust	-7.197	.125	-.079	.565
Communication	-1.832	.124	.020	.883
Alienation	- .131	.164	-.089	.425
Peers				
Trust	2.504	.206	.018	.903
Communication	-6.973	.185	-.049	.707
Alienation	1.471	.193	-.008	.939
Females				
Mothers				
Trust	-6.807	.144	-.068	.637
Communication	-2.927	.125	-.032	.815
Alienation	-1.139	.163	-.008	.944
Fathers				
Trust	-3.801	.093	-.049	.683
Communication	8.314	.101	.101	.411
Alienation	3.699	.148	.026	.801
Peers				
Trust	.145	.163	.107	.376
Communication	-7.224	.181	-.045	.691
Alienation	.100	.148	.053	.499

Note. *B* = Unstandardized beta weight, *SE B* = standard error of unstandardized beta weight, *β* = standardized beta weight.

The regression analysis with the attachment with mother subscales entered as the predictor variables and autonomy as the criterion variable was not significant, F (3, 231) = .821, p = .483. See Table 9 for a summary of the analysis. Hypothesis IVA for females was not supported. The prediction that for females level of attachment to mother would be related to level of reactance was not confirmed.

Results for Hypothesis IVB for Males.

It was hypothesized that level of attachment to father would be related to level of autonomy. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained and used as the predictor variables. The criterion variable was level of autonomy, as measured by The Adjective Checklist.

The regression analysis with the attachment with father subscales entered as the predictor variables and autonomy as the criterion variable was not significant, F (3, 147) = 1.430, p = .236. See Table 9 for a summary of the analysis. Hypothesis IVB for males was not supported. The prediction that for males level of attachment to father would be related to level of reactance was not confirmed.

Results for Hypothesis IVB for Females.

It was hypothesized that level of attachment to father would be related to level of autonomy. Attachment to father was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained and

used as the predictor variables. The criterion variable was level of autonomy, as measured by The Adjective Checklist.

The regression analysis with the attachment with father subscales entered as the predictor variables and autonomy as the criterion variable was not significant, F (3, 233) = .550, p = .649. See Table 9 for a summary of the analysis. Hypothesis IVB for females was not supported. The prediction that for females level of attachment to father would be related to level of reactance was not confirmed.

Results for Hypothesis IVC for Males.

It was hypothesized that level of attachment to peers would be related to level of autonomy. Attachment to peers was assessed using the Inventory for Parent and Peer Attachment. Three subscale scores (trust, communication, alienation) were obtained and used as the predictor variables. The criterion variable was level of autonomy, as measured by The Adjective Checklist.

The regression analysis with the attachment with peers subscales entered as the predictor variables and autonomy as the criterion variable was not significant, F (3, 155) = .065, p = .978. See Table 9 for a summary of the analysis. Hypothesis IVC for males was not supported. The prediction that for males level of attachment to peers would be related to level of reactance was not confirmed.

Results for Hypothesis IVC for Females.

It was hypothesized that level of attachment to peers would be related to level of autonomy. Attachment to peers was assessed using the Inventory for Parent and Peer

Attachment. Three subscale scores (trust, communication, alienation) were obtained and used as the predictor variables. The criterion variable was level of autonomy, as measured by The Adjective Checklist.

The regression analysis with the attachment with peers subscales entered as the predictor variables and autonomy as the criterion variable was not significant, F (3, 227) = .964, p = .411. See Table 9 for a summary of the analysis. Hypothesis IVC for females was not supported. The prediction that for females level of attachment to peers would be related to level of reactance was not confirmed.

Results of Hypothesis V for Males.

It was predicted that reactance would be related to autonomy. Results obtained from The Therapeutic Reactance Scale were used to form the independent variable of high (>=1 SD), medium (between -1 and +1 SD), and low (<-1 SD) psychological reactance. Level of autonomy, as measured by The Adjective Checklist was used as the dependent variable. Analysis of variance was used to assess the statistical significance of differences between groups. Differences between groups were analyzed with Tukey's Honestly Significant Difference (HSD) Post-Hoc test.

The ANOVA with level of reactance as the independent variable and autonomy as the dependent variable was significant, F (2, 154) = 15.215, p = .000. Hypothesis V for males was supported. The prediction that for males reactance would be related to autonomy was confirmed. See Table 10 for results of the ANOVA.

Table 10

Hypotheses V for Males and Females:

ANOVAs for Reactance and Autonomy

Source	*df*	M^2	*F*	*p*
Males				
Reactance	2	823.632	15.215	.000
(within)	154	54.132		
Females				
Reactance	2	535.424	8.686	.000
(within)	224	61.642		

Note. df = degrees of freedom, M^2 = mean squared, *F*= F value, *p* = significance level.

Tukey's HSD was used to analyze the significant differences between groups. There was no significant difference ($p = .692$) in autonomy scores between males who were low on reactance and males who were moderate on reactance. The 7.17 point difference in the autonomy scores of males who were moderate on reactance ($M = 50.45$) and males who were high on reactance ($M = 57.62$) was significant ($p = .001$). The 9.07 point difference in the autonomy scores of males who were low on reactance ($M = 48.55$) and males who were high on reactance ($M = 57.62$) was significant ($p = .000$). Males

scoring high on reactance also scored high on autonomy and males who did not score high on reactance did not score high on autonomy.

Results of Hypothesis V for Females.

It was predicted that reactance would be related to autonomy. Results obtained from The Therapeutic Reactance Scale were used to form the quasi-independent variable of high (>+1 SD), medium (between -1 and +1 SD), and low (<-1 SD) psychological reactance. Level of autonomy, as measured by The Adjective Checklist was used as the dependent variable. Analysis of variance was used to assess the statistical significance of differences between groups. Differences between groups were analyzed with Tukey's HSD post-hoc test.

The ANOVA with level of reactance as the independent variable and autonomy as the dependent variable was significant, $F(2, 224) = 8.686$, $p = .000$. Hypothesis V for females was supported. The prediction that for females reactance would be related to autonomy was confirmed. See Table 10 for the results of the ANOVA.

Tukey's HSD was used to analyze the significant differences between groups. The 3.39 point difference in autonomy scores between females who were low on reactance ($M = 48.88$) and females who were moderate on reactance ($M = 52.27$) was significant ($p = .021$). The 5.49 point difference in the autonomy scores of females who were moderate on reactance ($M = 52.27$) and females who were high on reactance ($M = 57.76$) was significant ($p = .018$). The 8.88 point difference in the autonomy scores of females who were low on reactance ($M = 48.88$) and females who were high on reactance ($M = 57.76$)

was significant (p = .000). Females scoring high on reactance also scored high on autonomy. Females scoring optimally on reactance scored moderately on autonomy. And females who scored low on reactance scored low on autonomy.

Results of Hypothesis VIA for Males.

It was predicted that autonomy would moderate the relationship between attachment to mother and reactance for males. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effect of age was blocked against psychological reactance. Secondly, attachment to mother was blocked against the components of psychological reactance. Next, autonomy was blocked against the components of reactance. Last, the interactions between attachment and autonomy were entered. Significant incremental variance added by the interaction of attachment and autonomy would have indicated that the autonomy construct moderated the effects of attachment to father on psychological reactance. Prior to regression analysis, intercorrelations of attachment to father and autonomy were examined to ensure that problems of multicollinearity were not present.

Step one was not significant (F = .030, p = .863). In step one age was not found to be a significant predictor of reactance (β = .015, p = .863). Step two was not significant (F = .988, p = .417). In step two neither age nor the attachment subscales were found to be significant predictors of reactance. Step three was significant (F = 9.238, p = .000). In step three, autonomy was the only significant predictor of reactance (β = .485, p = .000). Step four was significant (F = 6.843, p = .000). And in step four, the trust subscale of

attachment to mother (β = 1.803, p = .013), the alienation subscale of attachment to mother (β = -1.467, p = .033), the interaction of the trust subscale of attachment to mother and autonomy (β = -2.210, p = .011), and the interaction of the alienation subscale of attachment to mother and autonomy (β = 1.628, p = .035), were all found to be significant predictors of reactance. See Table 11 for a summary of the hierarchical regression analysis.

The results lent partial support to the hypothesis by confirming that attachment to mother and autonomy interact to affect reactance in males. However, it appeared that attachment was the moderator variable rather than autonomy.

Results of Hypothesis VI.A for Females.

It was predicted that autonomy would moderate the relationship between attachment to mother and reactance for females. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effect of age was blocked against psychological reactance. Secondly, attachment to mother was blocked against the components of psychological reactance. Next, autonomy was blocked against the components of reactance. Last, the interactions between attachment and autonomy were entered. Significant incremental variance added by the interaction of attachment and autonomy would have indicated that the autonomy construct moderated the effects of attachment to mother on psychological reactance. Prior to regression analysis,

Table 11

Hypothesis VIA, VIB, and VIC for Males:

Summary of Hierarchical Regression Analysis for Variables Predicting Reactance

Variable	*B*	*SE B*	*β*	*t*	*F*	*p*
Mothers						
Step 1					.030	.863
Age	2.493	.144	.015	.173		.863
Step 2					.988	.417
Age	1.484	.145	.009	.102		.919
T	- 7.854	.160	- .064	- .491		.624
C	- 3.483	.129	- .033	- .270		.788
A	- .165	.186	- .096	- .888		.376
Step 3					9.238	.000
Age	- 2.456	.128	- .014	- .192		.848
T	- 2.722	.141	- .022	- .193		.847
C	- 7.087	.114	- .068	- .924		.534
A	- 2.732	.165	- .016	- .165		.869
Au	.476	.074	.485**	6.409		.000
Step 4					6.843	.000
Age	- 2.945	.127	- .017	- .232		.817
T	2.227	.888	1.803**	2.508		.013
C	- .557	.714	- .532	- .781		.436
A	- 2.532	1.173	- 1.467**	- 2.159		.033
Au	.645	.485	.658	1.331		.185
T*Au	- 4.078	.016	- 2.210**	- 2.574		.011
C*Au	8.469	.013	.503	.646		.519
A*Au	4.682	.022	1.628	2.133		.035
Fathers						
Step 1					.016	.900
Age	1.839	.147	.011	.125		.900
Step 2					1.968	.103
Age	1.309	.144	.001	.009		.993
T	- .150	.146	- .153	- 1.029		.305
C	2.112	.146	.021	.144		.885
A	- .202	.195	- .128	- 1.036		.302

Table 11 (continued)

Hypothesis VI.A, VIB, and VIC for Males:

Summary of Hierarchical Regression Analysis for Variables Predicting Reactance

Variable	*B*	*SE B*	*β*	*t*	*F*	*p*
Step 3					9.977	.000
Age	-6.531	.126	- .004	- .052		.959
T	- .130	.128	- .133	-1.021		.309
C	6.126	.128	.061	.478		.633
A	- .139	.171	- .088	- .811		.419
Au	.510	.081	.483**	6.294		.000
Step 4					6.715	.000
Age	3.557	.126	.000	.003		.998
T	1.589	1.078	1.618	1.473		.143
C	-4.073	.880	- .041	- .046		.963
A	-2.129	1.329	-1.350	-1.602		.112
Au	.918	.477	.870	1.926		.056
T*Au	-3.261	.020	-1.991	-1.605		.111
C*Au	2.098	.017	.118	.127		.899
A*Au	3.806	.025	1.373	1.500		.136
Peers						
Step 1					.077	.781
Age	4.071	.146	.024	.278		.781
Step 2					1.264	.287
Age	5.740	.149	.034	.386		.700
T	-1.758	.245	- .012	- .072		.943
C	- .240	.225	- .157	-1.065		.289
A	-9.605	.223	- .045	- .431		.667
Step 3					10.902	.000
Age	2.787	.128	.016	.217		.828
T	-1.757	.211	- .012	- .083		.934
C	- .202	.194	- .132	-1.039		.301
A	-4.564	.192	- .021	- .238		.813
Au	.502	.073	.506**		6.906	.000

Table 11 (continued)

Hypothesis VIA, VIB, and VIC for Males:

Summary of Hierarchical Regression Analysis for Variables Predicting Reactance

Variable	*B*	*SE B*	*β*	*t*	*F*	*p*
Step 4					6.951	.000
Age	2.016	.129	.012	.156		.876
T	- .512	1.472	-.343	-.348		.728
C	.684	1.422	.448	.481		.632
A	-1.191	1.225	-.554	-.972		.333
Au	3.386	.660	.034	.051		.959
T*Au	9.727	.029	.530	.339		.735
C*Au	-1.715	.028	-.772	-.615		.540
A*Au	2.182	.023	.769	.932		.353

Note. T = Trust, C = Communication, A = Alienation, Au = Autonomy

B = Unstandardized beta weight, *SE B* = standard error of unstandardized beta weight, *β* = standardized beta weight. Following numerals * $p < .05$. ** $p < .01$.

In variable name "*" means interaction between the two variables.

intercorrelations of attachment to mother and autonomy were examined to ensure that problems of multicollinearity were not present.

Step one was significant ($F = 5.333$, $p = .022$). In step one, age was found to be a significant predictor of reactance ($\beta = -.157$, $p = .022$). Step two was not significant ($F = 2.223$, $p = .068$). In step two, age was a significant predictor of reactance ($\beta = -.165$, $p = .016$) but none of the attachment subscales were found to be significant. Step three was significant ($F = 8.443$, $p = .000$). In step three, age ($\beta = -.159$, $p = .013$) and autonomy

(β =.360, p = .000) were found to be significant predictors of reactance. Step four was significant (F = 5.538, p = .000). And in step four, only age was a significant predictor of reactance (β = -.152, p = .019). See Table 12 for a summary of the significant predictors in the hierarchical regression analysis. The results failed to support the hypothesis that autonomy moderates the relationship between attachment to mother and reactance for females. The results revealed that there was a negative correlation between age of female participant and level of reactance.

Results of Hypothesis VIB for Males.

It was predicted that autonomy would moderate the relationship between attachment to father and reactance for males. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effect of age was blocked against psychological reactance. Secondly, attachment to father was blocked against the components of psychological reactance. Next, autonomy was blocked against the components of reactance. Last, the interactions between attachment and autonomy were entered. Significant incremental variance added by the interaction of attachment and autonomy would have indicated that the autonomy construct moderated the effects of attachment to father on psychological reactance. Prior to regression analysis, intercorrelations of attachment to father and autonomy were examined to ensure that problems of multicollinearity were not present.

Step one was not significant (F = .016, p = .900). In step one, age was not a significant predictor of reactance (β = .011, p = .900). Step two was not

Table 12

Hypothesis VIA, VIB, and VIC for Females:

Summary of Hierarchical Regression Analysis for Variables Predicting Reactance

Variable	*B*	*SE B*	*β*	*t*	*F*	*p*
Mothers						
Step 1					5.333	.022
Age	- .208	.090	- .157	-2.309		.022
Step 2					2.223	.068
Age	- .219	.090	- .165	-2.420		.016
T	-2.513	.142	- .027	-2.420		.016
C	-2.479	.125	- .029	- .198		.843
A	- .110	.163	- .080	- .675		.501
Step 3					8.443	.000
Age	- .210	.084	- .159**	-2.494		.013
T	-1.357	.133	- .015	- .102		.919
C	-2.546	.117	- .030	- .218		.828
A	-8.369	.152	- .061	- .549		.583
Au	.337	.060	.360**	5.656		.000
Step 4					5.538	.000
Age	-2.010	.085	- .152**	-2.359		.019
T	- .208	.691	- .225	- .300		.764
C	- .637	.663	- .742	- .962		.337
A	1.432	1.053	1.041	1.361		.175
Au	.453	.280	.485	1.620		.107
T*Au	3.746	.013	.250	.294		.769
C*Au	1.194	.013	.818	.954		.341
A*Au	-2.929	.020	-1.273	-1.459		.146
Fathers						
Step 1					4.579	.034
Age	- .204	.096	- .149	-2.140		.034
Step 2					3.470	.009
Age	- .243	.095	- .176	-2.553		.011
T	- .143	.092	- .191	-1.554		.122
C	5.500	.099	.070	.554		.580
A	- .121	.151	- .090	- .804		.423

Table 12 (continued)

Hypothesis VIA, VIB, and VIC for Females:

Summary of Hierarchical Regression Analysis for Variables Predicting Reactance

Variable	*B*	*SE B*	*β*	*t*	*F*	*p*
Step 3					10.988	.000
Age	- .221	.087	- .161	-2.537		.012
T	- .116	.085	-1.540	-1.369		.172
C	1.243	.091	.016	.136		.892
A	- .132	.138	- .098	- .959		.339
Au	.375	.060	.391	6.202		.000
Step 4					7.333	.000
Age	- .227	.087	- .165	-2.605		.010
T	- .751	.624	-1.002	-1.203		.231
C	1.054	.560	1.339	1.882		.061
A	- .504	1.017	- .373	- .496		.620
Au	.330	.256	.345	1.290		.199
T*Au	1.241	.012	1.009	1.027		.306
C*Au	-1.992	.011	-1.492	-1.883		.061
A*Au	6.555	.019	.296	.342		.733
Peers						
Step 1					2.659	.105
Age	- .131	.080	- .113	-1.631		.105
Step 2					1.521	.197
Age	- .147	.082	- .127	-1.803		.073
T	-3.982	.172	- .029	- .231		.817
C	- 7.899	.184	- .049	- .429		.668
A	- .132	.151	- .074	- .874		.383
Step 3					8.291	.000
Age	- .118	.076	- .102	-1.561		.120
T	-9.442	.160	- .068	- .591		.555
C	- 3.398	.171	- .021	- .199		.842
A	- .184	.140	- .103	-1.311		.191
Au	.364	.062	.379	5.862		.000

Table 12 (continued)

Hypothesis VIA, VIB, and VIC for Females:

Summary of Hierarchical Regression Analysis for Variables Predicting Reactance

Variable	*B*	*SE B*	*β*	*t*	*F*	*p*
Step 4					5.468	.000
Age	- .112	.077	- .097	- 1.466		.144
T	- .347	1.128	- .251	- .307		.759
C	- .779	1.167	- .486	- .668		.505
A	1.032	.959	.575	1.076		.283
Au	.279	.490	.291	.569		.570
T*Au	5.172	.022	.324	.232		.817
C*Au	1.458	.023	.729	.640		.523
A*Au	- 2.397	.019	- 1.025	- 1.294		.197

Note. T = Trust, C = Communication, A = Alienation, Au = Autonomy

B = Unstandardized beta weight, *SE B* = standard error of unstandardized beta weight, *β* = standardized beta weight. Following numerals * $p < .05$. ** $p < .01$.

In variable name"*" means interaction between the two variables.

significant ($F = 1.968$, $p = .103$). In step two, neither age nor the attachment subscales were found to be significant predictors of reactance. Step three was significant ($F = 9.977$, $p = .000$). In step three, autonomy was the only significant predictor of reactance ($\beta = .483$, $p = .000$). Step four was significant ($F = 6.715$, $p = .000$). And in step four, there were no significant predictors of reactance. See Table 11 for a summary of the significant predictors in the hierarchical regression analysis. The results did not support

the hypothesis that autonomy moderates the relationship between attachment to fathers and reactance for males.

Results of Hypothesis VIB for Females.

It was predicted that autonomy would moderate the relationship between attachment to father and reactance for females. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effect of age was blocked against psychological reactance. Secondly, attachment to father was blocked against the components of psychological reactance. Next, autonomy was blocked against the components of reactance. Last, the interactions between attachment and autonomy were entered. Significant incremental variance added by the interaction of attachment and autonomy would have indicated that the autonomy construct moderated the effects of attachment to father on psychological reactance. Prior to regression analysis, intercorrelations of attachment to father and autonomy were examined to ensure that problems of multicollinearity were not present.

Step one was significant, ($F = 4.579$, $p = .034$). In step one, age was a significant predictor of reactance ($\beta = -.149$, $p = .034$). Step two was significant ($F = 3.470$, $p = .009$). In step two age, was a significant predictor of reactance ($\beta = -.176$, $p = .011$), but none of the attachment subscales were found to be significant predictors of reactance. Step three was significant ($F = 10.988$, $p = .000$). In step three, age ($\beta = -.161$, $p = .012$) and autonomy ($\beta = .391$, $p = .000$) were found to be significant predictors of reactance.

Step four was significant ($F = 7.333$, $p = .000$). And in step four, only age was a significant predictor reactance ($\beta = -.165$, $p = .010$). See Table 12 for a summary of the significant predictors in the hierarchical regression analysis. The results fail to support the hypothesis that autonomy moderates the relationship between attachment to father and reactance for females. The results revealed that there was a negative correlation between age of female participant and level of reactance.

Results of Hypothesis VIC for Males.

It was predicted that autonomy would moderate the relationship between attachment to peers and reactance for males. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effect of age was blocked against psychological reactance. Secondly, attachment to peers was blocked against the components of psychological reactance. Next, autonomy was blocked against the components of reactance. Last, the interactions between attachment and autonomy were entered. Significant incremental variance added by the interaction of attachment and autonomy would have indicated that the autonomy construct moderated the effects of attachment to peers on psychological reactance. Prior to regression analysis, intercorrelations of attachment to peers and autonomy were examined to ensure that problems of multicollinearity were not present.

Step one was not significant ($F = .077$, $p = .781$). In step one, age was not a significant predictor of reactance. Step two was not significant ($F = 1.264$, $p = .287$). In step two, neither age nor the attachment subscales were found to be significant predictors

of reactance. Step three was significant ($F = 10.902, p = .000$). In step three, autonomy was the only significant predictor of reactance ($\beta = .506, p = .000$). Step four was significant ($F = 6.951, p = .000$). And in step four there were no significant predictors of reactance. See Table 11 for a summary of the significant predictors in the hierarchical regression analysis. The results did not support the hypothesis that autonomy would moderate the relationship between attachment to peers and reactance for males.

Results of Hypothesis VIC for Females.

It was predicted that autonomy would moderate the relationship between attachment to peers and reactance for females. The effect of autonomy as a moderator variable was assessed using hierarchical regression analysis. First, the effect of age was blocked against psychological reactance. Secondly, attachment to peers was blocked against the components of psychological reactance. Next, autonomy was blocked against the components of reactance. Last, the interactions between attachment and autonomy were entered. Significant incremental variance added by the interaction of attachment and autonomy would have indicated that the autonomy construct moderated the effects of attachment to peers on psychological reactance. Prior to regression analysis, intercorrelations of attachment to peers and autonomy were examined to ensure that problems of multicollinearity were not present.

Step one was not significant ($F = 2.659, p = .105$). In step one, age was not a significant predictor of reactance ($\beta = -.113, p = .105$). Step two was not significant ($F = 1.521, p = .197$). In step two there were no significant predictors of reactance. Step three

was significant ($F = 8.291$, $p = .000$). In step three, only autonomy was a significant predictor of reactance ($\beta = .379$, $p = .000$). Step four was significant ($F = 5.468$, $p = .000$). And in step four, there were no significant predictor reactance. See Table 12 for a summary of the significant predictors in the hierarchical regression analysis. The results failed to support the hypothesis that autonomy moderates the relationship between attachment to peers and reactance for females.

CHAPTER 4

Discussion

Summary of Research Problem and Method

Multiple research studies have supported a positive relationship between reactance and autonomy (Seibel, 1994; Dowd and Wallbrown, 1993; Merz, 1983). Dowd and Seibel (1990) suggested that reactance developed because of one's parents fostering autonomy. Johnson and Buboltz (2000) found inconsistent evidence in that highly reactant individuals in their sample were low on autonomy, at least as it related to differentiation from one's family of origin.

Autonomy has long been thought to develop through a secure attachment to one's primary caregivers (Ainsworth, et al., 1978; Bowlby, 1977; Erikson, 1963). Since autonomy is developmental in origin and related to autonomy, and since reactance has been suggested to be developmental in origin and related to autonomy, it followed logically that attachment may have been related to the development of reactance and mediated by autonomy.

Interrelationships among reactance, attachment, and autonomy had been widely observed, but the direction and magnitude of those relationships was at issue. This study was intended to test the relationships among the three constructs to further understanding of the developmental nature of the relationships.

In order to assess these relationships, the Therapeutic Reactance Scale was used to measure reactance, the Adjective Checklist to measure Autonomy, and the Inventory of Parent and Peer Attachment to measure attachment because it allowed for the classification of attachment types based on the theories of Bowlby (1977) and Ainsworth, et al., (1978). The sample for this study included 415 students between the ages of 17 and 72 enrolled in Introduction to Psychology. The sample was comprised of the ethnic group percentages approximating the population at large and was approximately equally male and female. The hypotheses were analyzed with Analysis of Variance, Regression, and Hierarchical Regression. The alpha level of significance was set at .05.

Interpretation of Hypothesis IA for Males.

The results of Hypothesis IA for males indicated that attachment style to mother: secure, ambivalent, or avoidant, as measured by the IPPA, was unrelated to psychological reactance. It was hypothesized that men's attachment style toward their mothers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion it was strongly implicated theoretically.

The Inventory of Parent and Peer attachment measures three subscales of attachment: trust, communication, and alienation. When attachment was categorized as secure, avoidant, or anxious using the formula provided by Armsden and Greenberg (1987) based on the three subscale scores, there was even less support for the relationship between attachment and reactance than when continuous data were used. This may have been due in part to the drastic reduction in sample size following categorization. The

formula allowed for participants with certain scores on the three subscales to be categorized as a specific attachment type. However, many participants did not meet the required scores on the three subscales and had to be eliminated from the analysis.

For example, in the overall sample there were 415 participants and after categorization 265 were eliminated for attachment to mothers, 232 for attachment to fathers, and 339 for attachment to peers. On average two-thirds of the participants were eliminated from the analyses that categorized participants based on attachment style. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspects of development and are not related as theorized.

Interpretation of Hypothesis IA for Females.

The results of Hypothesis IA for females indicated that attachment style to mother: secure, ambivalent, or avoidant, as measured by the IPPA was unrelated to psychological reactance. It was hypothesized that women's attachment style toward their mothers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion, it was strongly implicated theoretically.

The Inventory of Parent and Peer attachment measures three subscales of attachment: trust, communication, and alienation. When attachment was categorized as secure, avoidant, or anxious using the formula of Armsden and Greenberg (1987) based on the three subscale scores, there was even less support for the relationship between attachment and reactance than when continuous data were used. This was in part due to

the drastic reduction in sample size following categorization. The formula allowed for participants with certain scores on the three subscales to be categorized as a specific attachment type. However, many participants did not meet the required scores on the three subscales and had to be eliminated from this analysis.

For example, in the overall sample there were 415 participants and after categorization 265 were eliminated for attachment to mothers, 232 for attachment to fathers, and 339 for attachment to peers. On average two-thirds of the participants were eliminated for the analyses that categorized participants based on attachment style. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspects of development and are not related as theorized.

Interpretation of Hypothesis IB for Males.

The results of Hypothesis IB for males indicated that paternal attachment style: secure, ambivalent, or avoidant, as measured by the IPPA, was unrelated to psychological reactance. It was hypothesized that men's attachment style toward their fathers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion, it was strongly implicated theoretically.

The Inventory of Parent and Peer attachment measures three aspects of attachment, trust, communication, and alienation. When attachment was categorized as secure, avoidant, or anxious using the formula of Armsden and Greenberg (1987) based on the three subscale scores, there was less support for the relationship between attachment and reactance than when continuous data were used. In fact, when continuous

data were used the relationship between men's attachments to their fathers was confirmed.

The reduced statistical power was in part due to the drastic reduction in sample size following categorization. The formula allowed for participants with certain scores on the three subscales to be categorized as a specific attachment type. However, many participants did not meet the required scores on the three subscales and had to be eliminated from the analysis.

For example, in the overall sample there were 415 participants and after categorization 265 were eliminated for attachment to mothers, 232 for attachment to fathers, and 339 for attachment to peers. On average two-thirds of the participants were eliminated for the analyses that categorized participants based on attachment style. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspect of development and are not related as theorized.

Interpretation of Hypothesis IB for Females.

The results of Hypothesis IB for females indicated that paternal attachment style: secure, ambivalent, or avoidant, as measured by the IPPA was unrelated to psychological reactance. It was hypothesized that women's attachment style toward their fathers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion, it was strongly implicated theoretically.

The Inventory of Parent and Peer attachment measures three aspects of attachment: trust, communication, and alienation. When attachment was categorized as

secure, avoidant, or anxious using the formula provided of Armsden and Greenberg (1987) based on the three subscale scores, there was even less support for the relationship between attachment and reactance than when continuous data were used. This was likely partly due to the drastic reduction in sample size following categorization. The formula allowed for participants with certain scores on the three subscales to be categorized as a specific attachment type. However, many participants did not meet the required scores on the three subscales and had to be eliminated from the analysis.

For example, in the overall sample there were 415 participants and after categorization 265 were eliminated for attachment to mothers, 232 for attachment to fathers, and 339 for attachment to peers. On average two-thirds of the participants were eliminated for the analyses that categorized participants based on attachment style. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspect of development and are not related as theorized.

Interpretation of Hypothesis IC for Males.

The results of Hypothesis IC for males indicated that attachment style to peers: secure, ambivalent, or avoidant, as measured by the IPPA, was unrelated to psychological reactance. It was hypothesized that men's attachment style toward their peers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion, it was strongly implicated theoretically.

The Inventory of Parent and Peer attachment measures three subscales of attachment: trust, communication, and alienation. When attachment was categorized as

secure, avoidant, or anxious using the formula of Armsden and Greenberg (1987), based on the three subscale scores, there was even less support for the relationship between attachment and reactance than when continuous data were used. This was in part due to the drastic reduction in sample size following categorization. The formula allowed for participants with certain scores on the three subscales to be categorized as a specific attachment type. However, many participants did not meet the required scores on the three subscales and had to be eliminated from the analysis.

For example, in the overall sample there were 415 participants and after categorization 265 were eliminated for attachment to mothers, 232 for attachment to fathers, and 339 for attachment to peers. On average two-thirds of the participants were eliminated for the analyses that categorized participants based on attachment style. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspect of development and are not related as theorized.

Interpretation of Hypothesis IC for Females.

The results of Hypothesis IC for females indicated that attachment style to peers: secure, ambivalent, or avoidant, as measured by the IPPA was unrelated to psychological reactance. It was hypothesized that women's attachment style toward their peers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion, it was strongly implicated theoretically.

The Inventory of Parent and Peer attachment measures three subscales of attachment, trust, communication, and alienation. When attachment was categorized as

secure, avoidant, or anxious using the formula of Armsden and Greenberg (1987) based on the three subscale scores, there was even less support for the relationship between attachment and reactance than when continuous data were used. This was in part due to the drastic reduction in sample size following categorization. The formula allowed for participants with certain scores on the three subscales to be categorized as a specific attachment type. However, many participants did not meet the required scores on the three subscales and had to be eliminated from the analysis.

For example, in the overall sample there were 415 participants and after categorization 265 were eliminated for attachment to mothers, 232 for attachment to fathers, and 339 for attachment to peers. On average two-thirds of the participants were eliminated for the analyses that categorized participants based on attachment style. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspect of development and are not related as theorized.

For Hypotheses IA, IB, and IC for males and females the relationship predicted to exist between attachment and reactance was not found. In each case it is possible that the reason for the lack of support lies in the theory. It is known that both reactance and attachment are related to freedom. Specifically, reactance ensures that one is able to maintain control over one's environment in the event that one's freedoms are threatened. Attachment on the other hand provides one with the freedom to choose whether one wants to exercise control over one's environment. Attachment may foster a sense of security that enables one to exert control if desired, but that same sense of security may

enable one to rely on one's attachment figure to control the environment. In the latter case, one may be securely attached and experience freedom, yet wield that freedom in such a way that no reactance, or controlling behavior is exerted. Thus attachment and reactance may both be related to freedom and control but demonstrated in different ways that were not measurable with the instruments used in this study.

Furthermore, attachment may be measuring more of an emotional bond between two persons and reactance may be measuring less of a feeling or emotion and more of an attitude, thought pattern, or behavior pattern. Therefore, what is experienced emotionally may not translate clearly into attitudes and behaviors that would be labeled reactance.

Another possible reason for the failure to find support for hypotheses IA, IB, and IC for males and females expands on the idea that reactance and attachment are both related to control. Theoretically, attachments foster freedom to develop control; however, it is not clear how long it would take one to develop this control. The population participating in this study had a mean age of 20.78 and a median age of 19. It is possible that this age cohort, while experiencing security and freedom, was still in the process of developing their sense of control and still in the process of learning to exert it. Therefore, it is likely that older adults will have developed a sense of control that would be related to reactance.

As noted above, the IPPA measures three aspects of attachment: trust, communication, and alienation. It is possible that none of these subscales adequately measure the component of attachment that is related to freedom and control, which is the

part of attachment that theoretically would be related to reactance. Perhaps another scale that measures other aspects of attachment would be more sensitive to any relationship between attachment and reactance.

Interpretation of Hypothesis IIA for Males.

The results of Hypothesis IIA for males indicated that level of maternal attachment, as measured by the IPPA, was unrelated to psychological reactance. It was hypothesized that male attachment to mothers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies confirmed this suggestion, it was strongly implicated though theory. While this hypothesis was not confirmed for attachments to mothers, there was a trend in the direction of low probabilities that represented strong relationships that did not reach the pre-established significance level of .05.

Perhaps the subscales measured by the IPPA did not assess the qualities of attachment that must have been related to reactance. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspects of development and are not related as theorized.

Interpretation of Hypothesis IIA for Females.

The results of Hypothesis IIA for females indicated that maternal attachment was unrelated to psychological reactance. It was hypothesized that women's attachment to mothers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion, it was strongly implicated though

theory. While this hypothesis was not confirmed for attachments to mothers, there was a trend in the direction of low probabilities that represented strong relationships that did not reach the pre-established significance level of .05.

The Inventory of Parent and Peer attachment measures three subscales of attachment, trust, communication, and alienation. Perhaps the subscales measured by the scale did not assess the qualities of attachment that would be related to reactance. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspects of development and are not related as theorized.

Interpretation of Hypothesis IIB for Males.

The results of Hypothesis IIB for males indicated that level of paternal attachment, as measured by the IPPA, was unrelated to psychological reactance. While the attachment to father subscale scores were significant predictors of reactance, none of the individual subscale scores, trust, communication, alienation, were significant predictors of reactance.

It was hypothesized that male attachment to fathers would be related to reactance, as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion, it was strongly implicated theoretically. This relationship between reactance and attachment was not supported for males in their attachment to their fathers when attachment was measured on a continuum and classified as low, moderate, and high. However, this hypothesis between a male's attachment to their father and level of reactance was supported when attachment was classified by style.

Interpretation of Hypothesis IIB for Females.

The results of Hypothesis IIB for females indicated that level of paternal attachment, as measured by the IPPA, was unrelated to psychological reactance. It was hypothesized that female attachment to fathers would be related to reactance as suggested by Dowd and Seibel (1990). This relationship had been suggested theoretically but no previous study had confirmed it. While this hypothesis was not confirmed for attachments to fathers, there was a trend in the direction of low probabilities that represented strong relationships that did not reach the pre-established significance level of .05.

Perhaps the subscales measured by the IPPA did not assess the qualities of attachment related to reactance. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspects of development and are not related as theorized.

Interpretation of Hypothesis IIC for Males.

The results of Hypothesis IIC for males indicated that level of attachment to peers, as measured by the IPPA, was unrelated to psychological reactance. It was hypothesized that male attachment to peers would be related to reactance as suggested by Dowd and Seibel (1990). There was strong theoretical support for this hypothesis but no previous studies had confirmed it. While this hypothesis was not confirmed for attachments to peers, there was a trend in the direction of low probabilities that

represented strong relationships that did not reach the pre-established significance level of .05.

Perhaps the subscales measured by the IPPA did not assess the qualities of attachment that would be related to reactance. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspects of development and are not related as theorized.

Interpretation of Hypothesis IIC for Females.

The results of Hypothesis IIC for females indicated that level of attachment to peers, as measured by the IPPA, was unrelated to psychological reactance. It was hypothesized that female attachment to peers would be related to reactance as suggested by Dowd and Seibel (1990). Though no previous studies had confirmed this suggestion it was strongly implicated though theory. Though this hypothesis was not confirmed, there was a trend in the direction of low probabilities that represented a strong relationship between female attachment to peers and reactance that did not reach the pre-established significance level of .05.

The Inventory of Parent and Peer attachment measures three subscales of attachment, trust, communication, and alienation. Perhaps the subscales measured by the scale did not assess the qualities of attachment that would be related to reactance. It is also possible that while attachment and reactance are both developmental in origin, they represent different aspects of development and are not related as theorized.

Interpretation of Hypothesis IIIA for Males.

The results of Hypothesis IIIA for males indicated that one's attachment style to one's mother, secure, ambivalent, or avoidant, as measured by the IPPA, was not related to autonomy.

It was hypothesized for males that attachment to mother and autonomy would be significantly related and support the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong support that exists for this relationship, and because it was not confirmed in this sample, it is highly likely that the instruments used were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

Another possible reason for the failure to support the hypothesis was that attachment was categorized into three different attachment styles. Many of the participants did not fit into any of the three categories, based on the three subscale scores using the formula provided by Armsden and Greenberg (1987), which resulted in a drastically reduced sample size, thus reducing statistical power.

The scale used to measure Autonomy, the adjective checklist, was chosen because of the subscale labeled "autonomy." While autonomy is popularly viewed positively, this scale used terms that would result in a negative view of people who endorsed a high number of items. The subscale was designed so that moderate scores would indicate desirable levels of autonomy. It is possible that other scales that measure characteristics similar to, and possibly synonymous with, autonomy would use more desirable terms so

that high scores would be viewed positively. Therefore another scale to measure autonomy in which high scores were deemed as socially desirable rather than undesirable may have yielded a different outcome.

Interpretation of Hypothesis IIIA for Females.

The results of Hypothesis IIIA for females indicates that one's attachment style, to one's mother, secure, ambivalent, or avoidant, as measured by the IPPA, is not related to autonomy.

It was hypothesized for females that attachment to mother and autonomy would be significantly related and corroborate the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong support that exists for this relationship, and because it was not confirmed in this sample, it is highly likely that the instruments used were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

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Interpretation of Hypothesis IIIB for Males.

The results of Hypothesis IIIB for males indicated that one's attachment style, to one's father, secure, ambivalent, avoidant, as measured by the IPPA, was not related to autonomy.

It was hypothesized that for males attachment to father and autonomy would be significantly related and support the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong support that exists for this relationship, and because it was not confirmed in this sample, it is highly likely that the instruments used were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

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Interpretation of Hypothesis IIIB for Females.

The results of Hypothesis IIIB for females indicated that one's attachment style to one's father, secure, ambivalent, or avoidant, as measured by the IPPA, was not related to autonomy.

It was hypothesized that for females attachment to one's father and autonomy would be significantly related and support the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong support that exists for this relationship, and because it was not confirmed in this sample, it is highly likely that the instruments used were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

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Interpretation of Hypothesis IIIC for Males.

The results of Hypothesis IIIC for males indicated that one's attachment style to one's peers, secure, ambivalent, or avoidant, as measured by the IPPA, was not related to autonomy.

It was hypothesized that for males attachment to peers and autonomy would be significantly related and support the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong support that exists for this relationship, and because it was not confirmed in this sample, it is highly likely that

the instruments used were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

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Interpretation of Hypothesis IIIC for Females.

The results of Hypothesis IIIC for females indicated that level of attachment to peers, secure, ambivalent, or avoidant, as measured by the IPPA, was not related to autonomy.

It was hypothesized that for females attachment to peers and autonomy would be significantly related and support the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong support that exists for this relationship, and because it was not confirmed in this sample, it is highly likely that the instruments used were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

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For Hypotheses IIIA, IIB, and IIIC for males and females, the failure to support the hypothesis that attachment would be related to autonomy may lie in incorrect conclusions having been drawn from theory. Attachment theory clearly indicates that autonomy develops out of a secure attachment to one's primary caregiver. Therefore, attachment and autonomy should be strongly related. However, since this was not the case among this sample perhaps attachment as experienced by this group of participants is different from the attachment necessary for the development of autonomy. It is true that this sample of participants was different from the children who are often the participants in studies of attachment in that they were adults.

Perhaps the key in this hypothesis not being supported lies in the fact that attachment as experienced by adults is different from the attachment experienced by children. Children are dependent on attachment figures, but adults, and particularly young adults like those participating in this study, strive for separation from primary caregivers, at least physically. Though high functioning adults still have favorable attachments to others, it is possible that these attachments are based on factors other than dependence. The aspects that comprise attachment may change over time in ways that were not measurable with the instruments used in this study.

Another possibility is that this sample was attached to others but not yet fully autonomous. Young adulthood is a developmental period in life in which people are striving for autonomy. Taub (1997) found that autonomy increased with each class year in college and the sample in this study was 61.2% freshmen and 24.8% sophomores,

leaving only 14% as upperclassmen. It is also a time in which young adults experience tension with their parents over the amount of autonomy parents are willing to allow. Often young adults are exerting their autonomy socially yet still quite dependent on their attachment figures emotionally and financially. This age group may not yet have fully developed their identities and may not see themselves as autonomous yet. The IPPA is designed to measure psychological security and if these young adults are in a stage of identity formation and are experiencing the challenges of college they may be less secure psychologically than younger, more carefree adolescents and older more established adults.

Gough and Heilbrum (1983) defined autonomy, as measured by the Adjective Checklist, as acting independently of others or of social values or expectations. In this sense autonomy is definitely not the positive characteristic that it is commonly hoped that securely attached people will develop. Therefore this measure of autonomy may not have measured the characteristic that theoretically should be related to attachment.

Interpretation of Hypothesis IVA for Males.

The results of Hypothesis IVA for males indicated that level of attachment to mother, as measured by the IPPA, was unrelated to autonomy.

It was hypothesized for males that attachment to mother and autonomy would be significantly related, thereby corroborating the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong evidence that this relationship exists and because it was not confirmed in this sample, it is highly likely

that the instruments used herein were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

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Interpretation of Hypothesis IVA for Females.

The results of Hypothesis IVA for females indicated that level of attachment to mother, as measured by the IPPA, was unrelated to autonomy.

It was hypothesized for females that attachment to mother and autonomy would be significantly related, thereby corroborating the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong evidence that this relationship exists and because it was not confirmed in this sample, it is highly likely that the instruments used herein were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

The scale used to measure Autonomy, the adjective checklist, was chosen because of the subscale labeled "autonomy." While autonomy is popularly viewed positively, this scale used terms that would result in a negative view of people who endorsed a high number of items. The subscale was designed so that moderate scores would indicate desirable levels of autonomy. It is possible that other scales that measure characteristics similar to, and possibly synonymous with, autonomy would use more desirable terms so that high scores would be viewed positively. Therefore another scale to measure autonomy in which high scores were deemed as socially desirable rather than undesirable may have yielded a different outcome.

Interpretation of Hypothesis IVB for Males.

The results of Hypothesis IVB for males indicated that level of attachment to father, as measured by the IPPA, was unrelated to autonomy.

It was hypothesized for males that attachment to father and autonomy would be significantly related, thereby corroborating the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong evidence that this relationship exists and because it was not confirmed in this sample, it is highly likely that the instruments used herein were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

The scale used to measure Autonomy, the adjective checklist, was chosen because of the subscale labeled "autonomy." While autonomy is popularly viewed positively, this scale used terms that would result in a negative view of people who endorsed a high

number of items. The subscale was designed so that moderate scores would indicate desirable levels of autonomy. It is possible that other scales that measure characteristics similar to, and possibly synonymous with, autonomy would use more desirable terms so that high scores would be viewed positively. Therefore another scale to measure autonomy in which high scores were deemed as socially desirable rather than undesirable may have yielded a different outcome.

Interpretation of Hypothesis IVB for Females.

The results of Hypothesis IVB for females indicated that level of attachment to father, as measured by the IPPA, was unrelated to autonomy.

It was hypothesized for females that attachment to father and autonomy would be significantly related, thereby corroborating the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong evidence that this relationship exists and because it was not confirmed in this sample, it is highly likely that the instruments used herein not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

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that high scores would be viewed positively. Therefore another scale to measure autonomy in which high scores were deemed as socially desirable rather than undesirable may have yielded a different outcome.

Interpretation of Hypothesis IVC for Males.

The results of Hypothesis IVC for males indicated that level of attachment to peers, as measured by the IPPA, was unrelated to autonomy.

It was hypothesized for males that attachment to peers and autonomy would be significantly related, thereby corroborating the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong evidence that this relationship exists and because it was not confirmed in this sample, it is highly likely that the instruments used herein were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

The scale used to measure Autonomy, the adjective checklist, was chosen because of the subscale labeled "autonomy." While autonomy is popularly viewed positively, this scale used terms that would result in a negative view of people who endorsed a high number of items. The subscale was designed so that moderate scores would indicate desirable levels of autonomy. It is possible that other scales that measure characteristics similar to, and possibly synonymous with, autonomy would use more desirable terms so that high scores would be viewed positively. Therefore another scale to measure autonomy in which high scores were deemed as socially desirable rather than undesirable may have yielded a different outcome.

Interpretation of Hypothesis IVC for Females.

The results of Hypothesis IVC for females indicated that level of attachment to peers, as measured by the IPPA, was unrelated to autonomy.

It was hypothesized for females that attachment to peers and autonomy would be significantly related, thereby corroborating the findings of Noom et al. (1999), Taub (1997), Blustein, et al. (1991), and Kenny (1990). Because of the strong evidence that this relationship exists and because it was not confirmed in this sample, it is highly likely that the instruments used herein were not sensitive to the same aspects of attachment, autonomy, or both that were assessed in previous studies.

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Interpretation of Hypothesis V for Males.

The results for Hypothesis V for males indicated that level of reactance, low, moderate, high, was related to autonomy. Males who scored low and moderate on

reactance scored moderately on autonomy and males who scored high on reactance scored high on autonomy.

The results of Hypothesis V confirmed the previous research of Pepper (1996), Dowd and Wallbrown (1994), Seibel (1994), and Merz (1983). Males who scored high on reactance also scored high on autonomy and males who did not score high on reactance did not score high on autonomy. This is consistent with the theory that optimal levels of reactance would be related to optimal levels of autonomy.

However, this positive correlation between autonomy and reactance was inconsistent with finding by Johnson and Buboltz (2000), which suggested that highly reactant individuals were low on autonomy. Johnson and Buboltz's findings make intuitive sense in that people who are low in autonomy and feel that they do not have much control would be highly reactant in that they would frequently feel that they had lost control over their freedoms. High levels of reactance are considered undesirable and autonomy is popularly considered desirable, so it makes sense that the two undesirable features, high reactance and low autonomy, would be associated.

However, the scale used in this study to measure autonomy is designed so that high scores are unfavorable, as mentioned earlier. So participants in this study who had favorable characteristics would have had moderate levels of reactance and moderate levels of autonomy. But since high autonomy is negative according to this scale it would be associated with the negative characteristic of high reactance. Therefore, the fact that in

this sample high reactance was correlated with high autonomy also makes intuitive sense and may not be inconsistent with the practical findings of Johnson and Buboltz after all.

Interpretation of Hypothesis V for Females.

The results for Hypothesis V for females indicated level of reactance, low, moderate, high, to be related to autonomy. Females who scored low on reactance scored lowest, but overall moderately on autonomy. Females who scored moderately on reactance scored moderately on autonomy, and females who scored high on reactance scored high on autonomy.

The results of Hypothesis V confirmed the previous research of Pepper (1996), Dowd and Wallbrown (1994), Seibel (1994), Merz (1983). Females either scored low on both autonomy and reactance, moderately on both variables, or high on both. This is consistent with the theory that optimal levels of reactance would be related to optimal levels of autonomy.

However, this positive correlation between autonomy and reactance was inconsistent with finding by Johnson and Buboltz (2000), which suggested that highly reactant individuals were low on autonomy. Johnson and Buboltz's findings make intuitive sense in that people who are low in autonomy and feel that they do not have much control would be highly reactant in that they would frequently feel that they had lost control over their freedoms. High levels of reactance are considered undesirable and autonomy is considered desirable, so it makes sense that the two undesirable features, high reactance and low autonomy, would be associated.

However, the scale used in this study to measure autonomy was designed so that high scores are unfavorable, as mentioned earlier. So participants in this study who had favorable characteristics would have had moderate levels of reactance and moderate levels of autonomy. But since high autonomy is negative according to this scale it would be associated with the negative characteristic of high reactance. Therefore, the fact that in this sample high reactance was correlated with high autonomy also makes intuitive sense and is consistent with the practical findings of Johnson and Buboltz.

Interpretation of Hypothesis VIA for Males.

The results of Hypothesis VIA for Males indicated that attachment to mother and autonomy interact to affect reactance. However, it appears that attachment is the moderator variable rather than autonomy because attachment alone was not found to be a significant predictor of reactance but autonomy was. Therefore, autonomy appears to have an effect on reactance but this effect is increased when autonomy is combined with attachment.

Ultimately it was predicted that autonomy would moderate the relationship between attachment and reactance. This was only true for males and their attachment to their mothers. However there was only partial support because attachment moderated the relationship between autonomy and reactance. The result was that attachment and autonomy definitely interacted to produce an effect on reactance.

This finding was interesting because in Hypothesis IIB for males, attachment to father was found to be related to psychological reactance and in Hypothesis V for males,

autonomy was found to be related to reactance. Yet in this analysis it was not males' attachment to father, but males' attachment to mother, that when combined with autonomy, had an effect on reactance. Intuitively it would seem that if attachment and autonomy had an interaction effect on reactance it would be the interaction between autonomy and attachment to fathers because these variables have main effects. Instead it was the interaction between autonomy and attachment to mothers that had an effect on reactance even though for males there was no simple effect for attachment to mother on reactance.

Interpretation of Hypothesis VIA for Females.

Previous analyses revealed that there was no relationship between attachment to mother and reactance for females. The results of Hypothesis VIA for females indicated that autonomy did not influence the lack of a relationship between attachment to mother and reactance. There was no relationship between autonomy and attachment to mother for females, no interaction for autonomy and attachment to mother on reactance, and no moderating effect of autonomy on attachment and reactance. For the present sample, analyses revealed that there was no relationship between attachment to mother and autonomy for females and certainly no combined effect of these two variables on reactance.

Interpretation of Hypothesis VIB for Males.

The results of Hypothesis VIB for males indicated that autonomy did not moderate the relationship between attachment to father and reactance. This study

confirmed in Hypothesis IIB that there was a relationship between attachment to father and reactance for males. Hypotheses IIIB and IVB indicated that for males there was no relationship between autonomy and reactance. Adding autonomy into the equation when examining the relationship between attachment to father and reactance for males did not explain any additional variance. There was no interaction effect for attachment to father and autonomy for males on reactance.

Interpretation of Hypothesis VIB for Females.

Previous analyses revealed that there was no relationship between attachment to father and reactance for females. The results of Hypothesis VIB for females indicated that autonomy did not influence the lack of a relationship between attachment to father and reactance. There was no relationship between autonomy and attachment to father for females, no interaction for autonomy and attachment to father on reactance, and no moderating effect of autonomy on attachment and reactance. For the sample in this study, analyses revealed that there was no relationship between attachment to father and autonomy for females and certainly no combined effect of these two variables on reactance.

Interpretation of Hypothesis VIC for Males.

Previous analyses revealed that there was no relationship between attachment to peers and reactance for males. The results of Hypothesis VIC for males indicated that autonomy did not influence the lack of a relationship between attachment to peers and reactance. There was no relationship between autonomy and attachment to peers for

males, no interaction for autonomy and attachment to peers on reactance, and no moderating effect of autonomy on attachment and reactance. For the sample in this study, analyses revealed that there was no relationship between attachment to peers and autonomy for males and certainly no combined effect of these two variables on reactance.

Interpretation of Hypothesis VIC for Females.

Previous analyses revealed that there was no relationship between attachment to peers and reactance for females. The results of Hypothesis VIC for females indicated that autonomy did not influence the lack of a relationship between attachment to peers and reactance. There was no relationship between autonomy and attachment to peers for females, no interaction for autonomy and attachment to peers on reactance, and no moderating effect of autonomy on attachment and reactance. For the sample in this study, analyses revealed that there was no relationship between attachment to peers and autonomy for females and certainly no combined effect of these two variables on reactance.

Implications

Based on the results of this study, attachment has no relationship to reactance, except in the case of male attachment to fathers. Thus, it does not behoove therapists to assess attachment when working with a reactance client. This is true unless the client is male, then there may be a possibility of an insecure attachment to the father. So for reactant females and reactant males that have secure attachments to their fathers,

therapists should not expect to reduce reactance by addressing the clients' attachment relationships because attachment is not related to reactance.

This study has added to the body of literature on reactance by validating the relationship between reactance and autonomy. People who are assessed as being low on reactance may not feel autonomous. This has implications for counselors working with clients who are low on reactance in that these clients may benefit from learning to take control of their circumstances and learning to take chances. Clients who are low on autonomy may not be willing to take the chances necessary to have success in their lives. Counselors can certainly arrange behavioral interventions in which clients are reinforced for taking chances and thus increase their levels of confidence, security, and autonomy.

Attachment and autonomy together do not give any more insight into a client's reactance than looking at attachment and autonomy separately. Therefore, if a therapist has clients who are not autonomous and do not act to ensure their freedoms, the therapist should not look to improve the clients' attachments assuming that the failure to develop autonomy was due to poor attachments. Assessing attachment relationships in addition to autonomy does not explain anymore about clients' reactance than assessing just autonomy alone. This is true for males and their attachments to their fathers and peers and females and their attachments to their mothers, fathers, and peers; however, it is not true for males and their attachments to their mothers. For males, their attachments to their mothers does interact with autonomy to effect reactance.

Autonomy and reactance are important variables to assess in therapy because of their role in the development of one's identity. According to Erikson, (1963) autonomy is a developmental precursor to identity development. Johnson and Buboltz (2000) found evidence to support their assertion that differentiation of self, which encompasses identity development, may play a role in reactance. With adolescents who have diffuse identities, it may be helpful for counselors to foster autonomy to facilitate identity development. Highly reactant clients may also benefit from techniques that build autonomy and promote differentiation of self. Developing one's identity would in turn be a developmental precursor to the development of healthy relationships that could offer emotional and other support.

Limitations of the Study

This study was limited by the moderate number of participants, particularly during some of the analyses that required that some participants be eliminated when they did not fit any of the three attachment styles. The study initially had 415 participants, which was adequate, but after categorization into attachment styles nearly two-thirds of participants were excluded from analysis. For these hypotheses, IA, IB, IC, IIIA, IIIB, and IIIC for males and females, the sample size was to small to give adequate statistical power. Given the trend for attachment and reactance to be related, it is quite possible that had the sample size been larger Hypotheses IA, IB, IC, IIIA, IIIB, and IIIC for males and females would have more likely been supported.

A second limitation of the study was the instruments chosen. Firstly, the Inventory of Parent and Peer Attachment, which measures diverse aspects of attachment to different people, also forces the categorization of a few participants while excluding most. The IPPA was also designed to assess attachment styles of adolescents and young adults up to age 20. Though the majority of participants in this study fell into that category, the few older adults' attachments may not have been measured adequately. It is possible that attachment may change over time and be different in children than it is in young adults and still different than it is in older adults. Perhaps the attachment theorized to be related to autonomy is the attachment experienced in children and not the attachment experienced in adulthood. An instrument better designed to measure the attachment adults experienced as children, that would have lead to their development of autonomy, may have yielded different results than this instrument designed to measure current psychological attachments.

The Adjective Checklist also did not seem to have measured Autonomy as it is popularly viewed. This discrepancy between desirable autonomy as it is seen socially and domineering and somewhat pathological autonomy as is measured by the adjective checklist may have resulted in invalid results. The hypotheses may have been supported had the instrument for the measurement of autonomy been designed so that high levels of autonomy were seen as desirable. The hypotheses, which were grounded in theory, may have been supported if different instruments for the measurement of attachment and autonomy had been used.

A third limitation of the study was the homogeneity of the sample, which produced a lack of generalizability. The participants were predominately young adults representing a theoretically privileged segment of society, being that they were all college students. This segment of the population, with a mean age of 20.78 years, may have responded differently to questions about attachment than younger or older adults would have due to different view points at various stages of life. Additionally, this sample was drawn from a relatively rural and geographically and culturally southern region of the United States. Therefore, the results from this sample may not be consistent with results that might be obtained from other regions.

Suggestions for Future Research

It is suggested that future research in this area using the IPPA collect a larger sample so that after categorization into attachment styles; secure, avoidant, and anxious, there will still be an adequate number of participants to conduct the analyses. A larger sample size may have also increased the chances of finding significant results in analyses where a level of significance was not reached, but for which a trend in the direction of significance was apparent, i.e. Hypotheses IIA, IIB, and IIC for males and females assessing the relationship between level of attachment and reactance.

In future research it is recommend that an instrument better suited to assess autonomy in such a way that a high level of autonomy is represented as a socially desirable quality, as it is popularly viewed to be, rather than as a negative characteristic. Another instrument that should be reconsidered in future studies is the IPPA. The IPPA

may not be measuring the same qualities of attachment that are necessary in young children for the development of autonomy. Perhaps an instrument better suited to measure the attachment relationship as it was in childhood would be a better predictor of autonomy.

Another suggestion is that a younger sample, perhaps adolescents, be measured because their autonomy may be more a result of their attachment, as theorized by Erikson and predicted in the present study, rather than a result of financial and physical independence from one's parents as is the case for many college students. The autonomy found in adolescents may precede reactance, whereas the autonomy experienced by young adults may be fostered by reactance.

Yet another suggestion is to conduct this research with a more stable population, such as older adults, who have certainly established their identities and have attachments that may not be affected by the desire for independence that young adults away from home for the first time often experience. Participants from different geographic regions should be studied as well to assess whether there are cultural differences in attachment and autonomous functioning.

It is recommended that developmental variables and family dynamic variables other than attachment be assessed to see if they relate to reactance and autonomy, i.e. family cohesion, differentiation of self, emotional expressiveness, etc. Perhaps the developmental nature of reactance and autonomy is not related to attachment, but related to some other dynamic developed through family experiences.

Summary

In summary, the present study served to add to the body of literature on reactance. Unfortunately, rather than clarifying the relationships among reactance, attachment, and autonomy, this study further complicated the relationships through findings that were inconsistent with previous research. The results suggested that moderate levels of attachment and reactance are optimal and related to each other. However, attachment styles are not related to reactance. Perhaps it is that an emotional bond is present, that has an effect on reactance, rather than the nature of that emotional bond.

Previous research was supported in that reactance and autonomy were related. This only contradicts the findings of Johnson and Buboltz (2000) who found that highly reactant individuals had not individuated from their families of origin and were thus low in autonomy. This may indicate that differentiation of self and autonomy are in fact two different constructs.

As for there being a moderating effect of autonomy on reactance, evidence was lacking. For males, attachment to mother and autonomy definitely interacted to affect reactance. However, it seems that attachment and autonomy are unrelated to each other. In fact, autonomy may have a greater impact on reactance than attachment and therefore affect reactance on its own rather than adding to effect of attachment.

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Appendix A

HUMAN SUBJECTS CONSENT FORM

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

PRINCIPAL INVESTIGATOR: M.T. Hargrove Ladner, Mhargrove@selu.edu.

TITLE: Psychological Reactance as a Personality Characteristic: Relationships to Attachment and Autonomy

PURPOSE: The experiment in which you are about to participate is designed to investigate the relationship between psychological reactance, attachment, and autonomy.

PROCEDURES: In this experiment you will be asked to complete a demographic questionnaire as well as 3 surveys designed to assess your attitudes, feelings, beliefs, behaviors and personality characteristics.

INSTRUMENTS: A Demographic Questionnaire, The Therapeutic Reactance Scale, The Adjective Checklist, and The Inventory of Parent and Peer Attachment.

RISKS/ALTERNATIVE TREATMENTS: None

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

I attest with my signature on this page that I have read and understood the above description of the study, " Psychological Reactance as a Personality Characteristic: Relationships to Attachment and Autonomy, " 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 Southeastern Louisiana 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.

NAME:_____ DATE: _____

Appendix B

HUMAN SUBJECTS CONSENT FORM

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

PRINCIPAL INVESTIGATOR: M.T. Hargrove Ladner, Mhargrove@selu.edu.

TITLE: Psychological Reactance as a Personality Characteristic: Relationships to Attachment and Autonomy

PURPOSE: The experiment in which you are about to participate is designed to investigate the relationship between psychological reactance, attachment, and autonomy.

PROCEDURES: In this experiment you will be asked to complete a demographic questionnaire as well as 3 surveys designed to assess your attitudes, feelings, beliefs, behaviors and personality characteristics.

INSTRUMENTS: A Demographic Questionnaire, The Therapeutic Reactance Scale, The Adjective Checklist, and The Inventory of Parent and Peer Attachment.

RISKS/ALTERNATIVE TREATMENTS: None

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

I attest with my signature on this page that I have read and understood the above description of the study, " Psychological Reactance as a Personality Characteristic: Relationships to Attachment and Autonomy, " 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 Southeastern Louisiana 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.

NAME: _____ **DATE:** _____

Appendix C

TRS

Instructions: Please answer each item by circling the appropriate number on the on the answer sheet.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. If I receive a lukewarm dish at a restaurant, I make an attempt to let that be known.	1	2	3	4
2. I resent authority figures who try to tell me what to do.	1	2	3	4
3. I find that I often have to question authority.	1	2	3	4
4. I enjoy seeing someone else do something that neither of us is supposed to do.	1	2	3	4
5. I have a strong desire to maintain my personal freedom.	1	2	3	4
6. I enjoy playing "devil's advocate" whenever I can.	1	2	3	4
7. In discussions, I am easily persuaded by others.	1	2	3	4
8. Nothing turns me on as much as a good argument!	1	2	3	4
9. It would be better to have more freedom to do what I want on a job.	1	2	3	4
10. If I am told what to do, I often do the opposite.	1	2	3	4
11. I am sometimes afraid to disagree with other.	1	2	3	4
12. If really bothers me when police officers tell people what to do.	1	2	3	4
13. It does not upset me to change my plans because someone in the group wants to do something else.	1	2	3	4

	Strongly Disagree	Disagree	Agree	Strongly Agree
14. I don't mind other people telling me what to do.	1	2	3	4
15. I enjoy debates with other people.	1	2	3	4
16. If someone asks a favor of me, I will think twice about what this person is really after.	1	2	3	4
17. I am not very tolerant of others' attempts to persuade me.	1	2	3	4
18. I often follow the suggestions of others.	1	2	3	4
19. I am relatively opinionated.	1	2	3	4
20. It is important to me to be in a powerful position relative to others.	1	2	3	4
21. I am very open to solutions to my problems from others.	1	2	3	4
22. I enjoy "showing up" people who think they are right.	1	2	3	4
23. I consider myself more competitive than cooperative.	1	2	3	4
24. I don't mind doing something for someone even when I don't know why I'm doing it.	1	2	3	4
25. I usually go along with others' advice.	1	2	3	4
26. I feel it is better to stand up for what I believe than to be silent.	1	2	3	4
27. I am very stubborn and set in my ways.	1	2	3	4
28. It is very important for me to get along well with the people I work with.	1	2	3	4

Appendix D

Demographic Questionnaire

AGE: _____

Please place an "X" by the answer that best describes you.

GENDER:
_____ MALE
_____ FEMALE

COLLEGE STATUS:
_____ FRESHMAN
_____ SOPHOMORE
_____ JUNIOR
_____ SENIOR

RACE:
_____ AFRICAN AMERICAN
_____ ASIAN
_____ CAUCASIAN
_____ LATINO
_____ OTHER:_____

YOUR PARENTS' MARITAL STATUS:
_____ MARRIED TO EACH OTHER
_____ DIVORCED FROM EACH OTHER
_____ NEVER MARRIED TO EACH OTHER

WHO WAS PRIMARILY RESPONSIBLE FOR REARING YOU?
_____ MOTHER
_____ FATHER
_____ MOTHER AND FATHER
_____ MOTHER AND STEP FATHER
_____ FATHER AND STEP MOTHER
_____ STEP MOTHER
_____ STEP FATHER
_____ OTHER: _____

LOUISIANA TECH
UNIVERSITY

RESEARCH & GRADUATE SCHOOL

MEMORANDUM

TO: M..T. Hargrove Ladner
Walter C. Buboltz ✓

FROM: Deby Hamm, Graduate School

SUBJECT: HUMAN USE COMMITTEE REVIEW

DATE: December 14, 2001

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

"Psychological reactance as a personality characteristic: relationships to attachment and autonomy"

Proposal # 1-XE

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

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