

AN EXAMINATION OF THE NATURE OF A PROBLEMATIC/ CONSUMER
BEHAVIOR: COMPULSIVE PURCHASING/ AS A LEARNED
ADAPTIVE RESPONSE,/ ADDICTION, AND
PERSONALITY DISORDER

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

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The problem examined in this study was the nature of compulsive purchasing behavior. Three proposed models depicting this behavior as a learned adaptive response to anxiety and/or depression, an addiction, and a personality disorder were introduced and discussed in Chapter I. Background information concerning the areas examined in the models was presented in Chapter II. The research methodology was discussed in Chapter III and the findings of the research presented in Chapter IV. A summary, conclusions, implications, and recommendations were presented in Chapter V.

The purpose of this research was to examine hypotheses in support of each of the three proposed models. Two separate quasi-experimental designs and three groups of subjects were used to test the hypotheses. The three groups used were compulsive purchasers, alcoholics, and overeaters. The first experiment utilized Scale 7 (Compulsive), Scale A (Anxiety), and Scale D (Dysthymia) on the MCMI-II to examine differences in personality patterns in the three groups.

The second experiment utilized a self-report questionnaire to examine differences in compulsive purchasing behavior patterns in the three groups. The effect of the type of product (durable, nondurable, or service) on reported behavior was also examined.

The results of the first MANOVA analysis indicated no significant difference in compulsivity, anxiety, or dysthymia between the three groups. The second MANOVA analysis indicated a significant difference in behaviors primarily in the nondurable product category between compulsive purchasers and overeaters only. The overall results partially support the addiction model. The learning model and the compulsivity model were not supported by this research.

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CHAPTER I

INTRODUCTION

"When the going gets tough, the tough go shopping."
"Shopping is the fine art of acquiring things you don't need with money you don't have." "Whoever says money doesn't buy happiness doesn't know where to shop."

These and many other popular expressions can be seen anywhere from tee-shirts to bumper stickers and are indicative of the attitude many hold toward one of this culture's favorite pastimes--shopping. An afternoon in any regional mall in this country reveals a diversity of people from senior citizens walking for exercise to pre-teenagers dropped off by parents to be "babysat" by the mall. Many are just window-shoppers, but many others can be seen with their arms full of packages. Shopping has become a social experience in this culture and, for some, the primary source of gratification in their lives.

It is the latter group of consumers, compulsive buyers, who were the focus of this research. Compulsive buying is increasingly becoming a concern not only for consumers who have the problem but also for credit-granting institutions and marketing institutions that are socially conscientious. An understanding of this problem is essential to aid

agencies in helping these consumers and to give direction to marketers who are interested in helping to prevent this behavior in the marketplace. The thrust of this research is to examine and contribute to a potential explanation of the compulsive purchasing cycle.

Popular Literature Focus

The problem of compulsive buying has received much attention recently in popular publications, but, apparently, has not yet been examined by scholars in the marketing discipline. Winestine (1978) examined compulsive shopping from a psychoanalytic perspective presented in the form of a case study. He concluded that this compulsive behavior was a manifestation of feelings of humiliation and worthlessness stemming from episodes of seduction and sexual molestation during childhood. King (1981) discussed the problem of addictive consumption from a theoretical perspective and concluded that the phenomenon was a result of the pressure exerted on consumers by the advertisements in a materialistic culture. These two articles are the only articles which examine the problem of compulsive spending with an attempt to generate possible explanations of causality.

The descriptive articles of compulsive buying appear in popular magazines, usually those whose audience demographics reflect primarily women readers. Brandt (1987) examined the

problem of "shopaholics" with particular emphasis on the debt problems which arise from this behavior. She reports that psychiatrists compare compulsive shoppers to other kinds of addicts and claim that shopaholics have poor impulse control and use their addiction to shopping to cover up feelings of inadequacy. She also reports that compulsive shoppers tend to spend money whenever something goes wrong.

Tkac (1987) describes the case of Susan, a shopping addict:

Susan is an actress who buys herself a pair of shoes every time she doesn't get a part. At least that's how it started. Now, she admits, buying shoes is as routine as picking up a loaf of bread. "Anytime I'm near a shoe department I can't stop myself from stopping and looking. And unless I absolutely hate everything I see, I wind up buying a pair, sometimes even two." . . . Susan admits to having at least 60 pairs of shoes in her bedroom closet, all neatly tucked away in clear-plastic shoe boxes (p. 62).

Tkac also reports the opinion of psychologists who believe that compulsive spending is an addiction, just like gambling, alcoholism, and drugs. They also believe that a compulsive spending problem exists if shopping "becomes an entrenched way to handle your feelings and it results in guilt and anxiety" (p. 63).

Jacoby (1986) also reports an account by an individual with a shopping obsession:

I get high when I catch the first whiff of perfume from the cosmetics counters. I'm flying the whole time I'm at the stores. The crash comes the next day when I look at the price tags on everything I've bought. I tell myself I'll

never do it again, but I know I will. The high is worth the letdown (p. 318).

Jacoby points out the similarity of the terminology used in the description with that used by those physically addicted to drugs or alcohol. The article discusses the results of a survey dealing with compulsive buying behavior to which 1,600 individuals responded. In addition to completing the survey, many respondents returned long, detailed letters describing compulsive buying as a nightmare which has led to bankruptcy, liens on their homes, and attempts to steal money from friends, relatives, and employers. The survey reinforced the premise that the compulsive purchasing cycle is related to anxiety, guilt, and depression.

Bernikow (1985) reports a case study in which the individual describes her behavior as more of an obsession than an addiction:

I knew the fit was on me the minute I woke up. I tried to resist, set my mind to other things, made breakfast, went to work, and all the time there was this prod in the back of my head. "Oh, come on," a little voice said, "just do it." By noon, my resistance had faded. All right, I gave in. I did it for the entire afternoon. It felt wonderful at the time, more wonderful than I can tell. Afterward, I had a terrible comedown, feeling guilty, ashamed and full of remorse. When my boyfriend asked if I'd been doing it that afternoon, I lied (p. 120).

Another case study reported in the article describes an actress who purchased 50 sweaters on one shopping spree to overcome feelings of powerlessness being experienced as a

result of her career. Bernikow makes the point that compulsive spenders never need what they buy, they need to buy.

Numerous case studies reported in other articles (Fortino 1982; Seligmann, Greenberg, Bailey, and Burgower 1985; Viorst 1986; Williams 1986) reflect similar experiences described by compulsive spenders. Seligman, et.al. (1985) reports the opinions of Dr. William Rader, a psychiatrist, who believes that spending is a secret compulsion of which most Americans aren't aware. The overwhelming response he received after a discussion of this problem on a Los Angeles talk show convinced Rader that the problem is widespread.

A model which explains the consumer behavior occurring in a problematic purchasing cycle is needed. Such a model would expand the consumer behavior discipline to recognize situations in which consumers are not behaving as "rational man" (i.e., making purchase decisions which maximize economic utility) and in which the purchasing act itself assumes the role of the most important reinforcing agent for the consumer. Three possible models explaining the cycle of compulsive purchasing are introduced in this chapter. The theoretical background of the models is examined in Chapter II. The research methodology is presented in Chapter III. The results of the testing of the models are

presented in Chapter IV and the conclusions, implications, and recommendations are discussed in Chapter V.

Statement of the Problem

The problem examined in this study was compulsive purchasing, a behavior which is increasingly becoming a concern for many consumers and credit-granting institutions. Specific behavior aspects thought to be related to compulsive purchasing were examined. Included were the influence of anxiety and depression on compulsive purchasing behavior and the role of learning, addiction, and compulsive personality in the cycle of compulsive purchasing.

Purpose of the Study

The purpose of this study was to examine the process which takes place in the cycle of compulsive purchasing behavior. The three behavior models which are introduced offer alternative explanations of the cycle of compulsive purchasing behavior. Each model was tested to determine if the propositions of the model are supported.

Definitions of the Constructs

Several theoretical constructs were used in developing the three models. According to Bagozzi (1980), a theoretical construct is defined within the context of a theory by its relationship with other theoretical constructs and empirical concepts. Therefore, the definition of a

particular construct can vary from one theory to another. The constructs which will be examined in this study include compulsive purchasing behavior, mood states or emotions, immediate and ultimate effects, addiction, and compulsivity. The definitions of these constructs in the context of the current theory are discussed in the following sections.

Compulsive Purchasing Behavior

Compulsive purchasing behavior can best be defined, in light of the current research, as a cycle of intense purchasing which is precipitated by a negative mood state or emotion and is typified by any eight or more of the behaviors and/or attitudes reflected in the scale measuring compulsive purchasing developed by Richard H. Landess (Tkac 1987). The scale is reproduced in Table 1.

Mood States

Mood state is defined as a state of mind determined by temporarily prevailing emotion(s) and which serves as an

Table 1

Landess's Scale of Compulsive Purchasing

- 1) Is shopping your major form of activity?
- 2) Do you buy new clothes that sit in the closet for weeks or even months before you wear them?

(Table Continues)

Table 1 (continued)

- 3) Do you spend more than 20 percent of your take-home pay to cover your loans and credit cards?
- 4) Do you ever pay one line of credit with another?
- 5) Do you pay only the minimum balance on your charge accounts each month?
- 6) Do you ever hide your purchases in the car or lie about them so your spouse doesn't know you were shopping?
- 7) Do you ever lie about how much something cost so your spouse or friends think you were just after a great bargain?
- 8) Do you buy something just because it's on sale even though you have no use for it?
- 9) When out with friends for dinner, do you offer to put the check on your credit card so you can collect the cash?
- 10) Do you feel nervous and guilty after a shopping spree?
- 11) Is your paycheck often gone on Tuesday when the next payday isn't until Friday?
- 12) Do you borrow money from friends, even though you know you'll have a hard time paying it back?
- 13) Do you frequently have to charge small purchases, such as toiletry items and groceries, because you don't have enough cash in your pocket?
- 14) Do you think others would be horrified if they knew how much money you spent?
- 15) Do you often feel hopeless and depressed after spending money?

indicator of how the individual experiences the quality of their present existence (Becker 1974). The difference between mood state and emotion is the breadth or

generality. Moods are pervasive while emotions are relatively transient and specific to particular contexts (Becker 1974).

The three dominant mood states considered in the present study are anxiety, depression, and guilt. Anxiety is defined as the apprehension, tension, or uneasiness that stems from the anticipation of danger, which may be internal or external. The source of the anticipated danger is largely unknown to the anxious individual (American Psychiatric Association 1980). Depression is defined as the emotional state characterized by extreme dejection, gloomy ruminations, feelings of worthlessness, loss of hope, and often apprehension (American Psychiatric Association 1980). Guilt is defined as the feelings of remorse experienced by the individual after engaging in a behavior which is contrary to the principles and values of the individual. Guilt involves both self-devaluation and apprehension growing out of fears of punishment (Coleman, Butcher, and Carson 1984).

Immediate and Ultimate Effects

The immediate effect is defined as the conditioned short-term reinforcement which is the result of engaging in a particular behavior (Weinberg 1978). The immediate effect in the compulsive purchasing cycle is the instantaneous relief from negative mood states which occurs immediately

after the purchase. The ultimate effect will be defined as the long-term result of engaging in a particular behavior (Weinberg 1978). The ultimate effect in compulsive purchasing behavior may occur at any time after the immediate effect--from minutes after the purchase to the point in time the credit card bill is received.

Addiction

The cycle of addiction can best be defined by looking at definitions of similar psychological addictions, such as pathological gambling, kleptomania, and pyromania. In the Diagnostic and Statistical Manual, Third Edition (American Psychiatric Association 1980), these excessive behaviors are classified as disorders of impulse control. The definition of impulse control will be used to define addiction in this study since other similar types of psychological addictions are defined using this DSM-III classification.

The essential features of disorders of impulse control are:

1. Failure to resist an impulse, drive, or temptation that is harmful to the individual or others. There may or may not be conscious resistance to the impulse. The act may or may not be premeditated or planned.
2. An increasing sense of tension before committing the act.
3. An experience of either pleasure, gratification, or release at the time of committing the act. The act is ego-syntonic in that it is consonant with the immediate conscious wish of the individual. Immediately

following the act there may or may not be genuine regret, self-reproach, or guilt.

Compulsivity

Compulsivity is defined as the predisposition to engage in repetitive and seemingly purposeful behavior that is performed according to certain rules or in a stereotyped fashion. The behavior is not an end in itself, but is designed to produce or prevent some future state of affairs (American Psychiatric Association 1980). Individuals with the compulsive personality disorder show excessive concern for rules, order, efficiency, and work. They also insist that others do things their way and have an inability to express warm feelings. These individuals tend to be overinhibited, overconscientious, overdutiful, and rigid (Coleman, Butcher, and Carson 1984).

Introduction of the Models

Three models are introduced as alternative explanations of the compulsive purchasing cycle. The thrust of the three models depict compulsive purchasing as: 1) a conditioning process based on learning theory; 2) a psychological addiction which is manifested in a cycle of behavior; and, 3) a result of symptoms associated with the compulsive personality disorder.

The three models represent a building process. The most basic model is the learning model which depicts

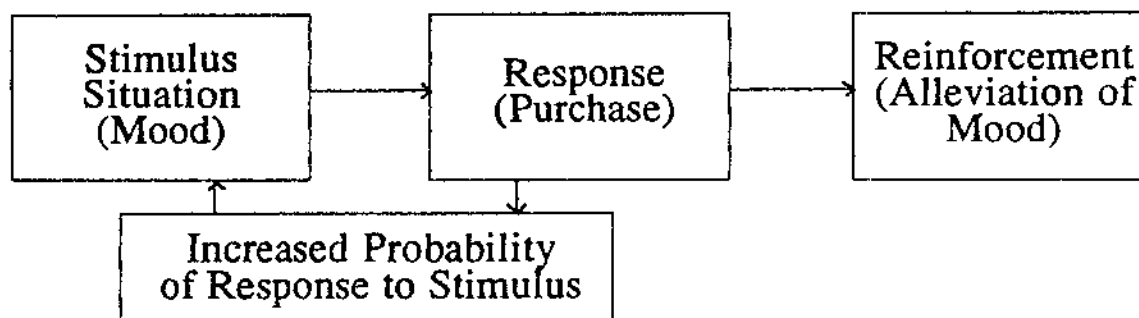
compulsive purchasing as a conditioned defensive strategy against anxiety and depression. The addiction model incorporates the conditioning process, but expands the initial model to include a cycle of behavior common to many physical and psychological addictions. The compulsivity model of compulsive purchasing behavior incorporates the previous two models, but also takes into account characteristics of the compulsive personality disorder which are applicable to this behavior. Therefore, if the compulsivity model is supported, the previous models should logically fit into this final model. If the addiction model is supported, the learning model will be logically be supported, but not necessarily the compulsivity model. The three alternative models are introduced and discussed in the following sections.

A Learning Model of Compulsive Purchasing Behavior

The first model emphasizes the importance of learning in establishing this cycle and is depicted in Figure 1.

Figure 1

A Learning Model of Compulsive Purchasing Behavior



The model presented is an adaptation of a similar model explaining consumer learning by reinforcement in a marketing context (Bergiel and Trosclair 1985). The model represents a rather simplistic approach to explaining the compulsive purchasing cycle. With this approach, the consumer is hypothesized to engage in the behavior as a result of the reinforcement of the behavior. The consumer learns to engage in purchasing behavior because that particular behavior results in a better feeling than was present before engaging in the behavior. The probability of engaging in purchasing behavior increases as a result of the reinforcement. This cycle represents an adaptive response by the consumer to the environment in which she/he operates through the consistent use of purchasing as a defensive strategy when faced with anxiety or depression.

An Addiction Model of Compulsive Purchasing Behavior

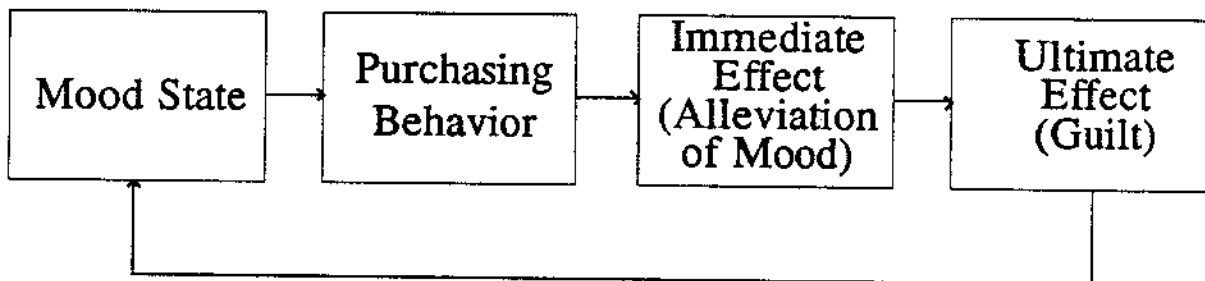
The second model represents a cycle which is similar to those which are used to explain various physical and psychological addictions (Bergler 1974; Coleman, Butcher, and Carson 1984; Greenson 1974; Hartung and Farge 1981; Hyde 1978; Peele 1975; Reed and Briney 1986; Weinberg 1978). This model reflects the addictive cycle and is depicted in Figure 2.

This model depicts the commonly accepted model of addictive or excessive behavior. The mood states commonly

experienced in individuals engaging in addictive behavior are anxiety and/or depression. When these mood states are experienced, the individual is compelled to engage in purchasing behavior, since this behavior results in the

Figure 2

An Addiction Model of Compulsive Purchasing Behavior



immediate effect--the alleviation of the mood states. This alleviation occurs as soon as the purchase takes place, but is temporary. The ultimate effect, guilt, sets in at some point after the purchase is made and the immediate effect has been achieved. Examples of possible cues for the ultimate effect include the realization that the individual cannot afford the purchase or the threat of reprimand by a significant other. This is very similar to postpurchase dissonance which has been examined in the marketing literature. However, the intensity of the guilt experienced by the individual serves to increase the mood states

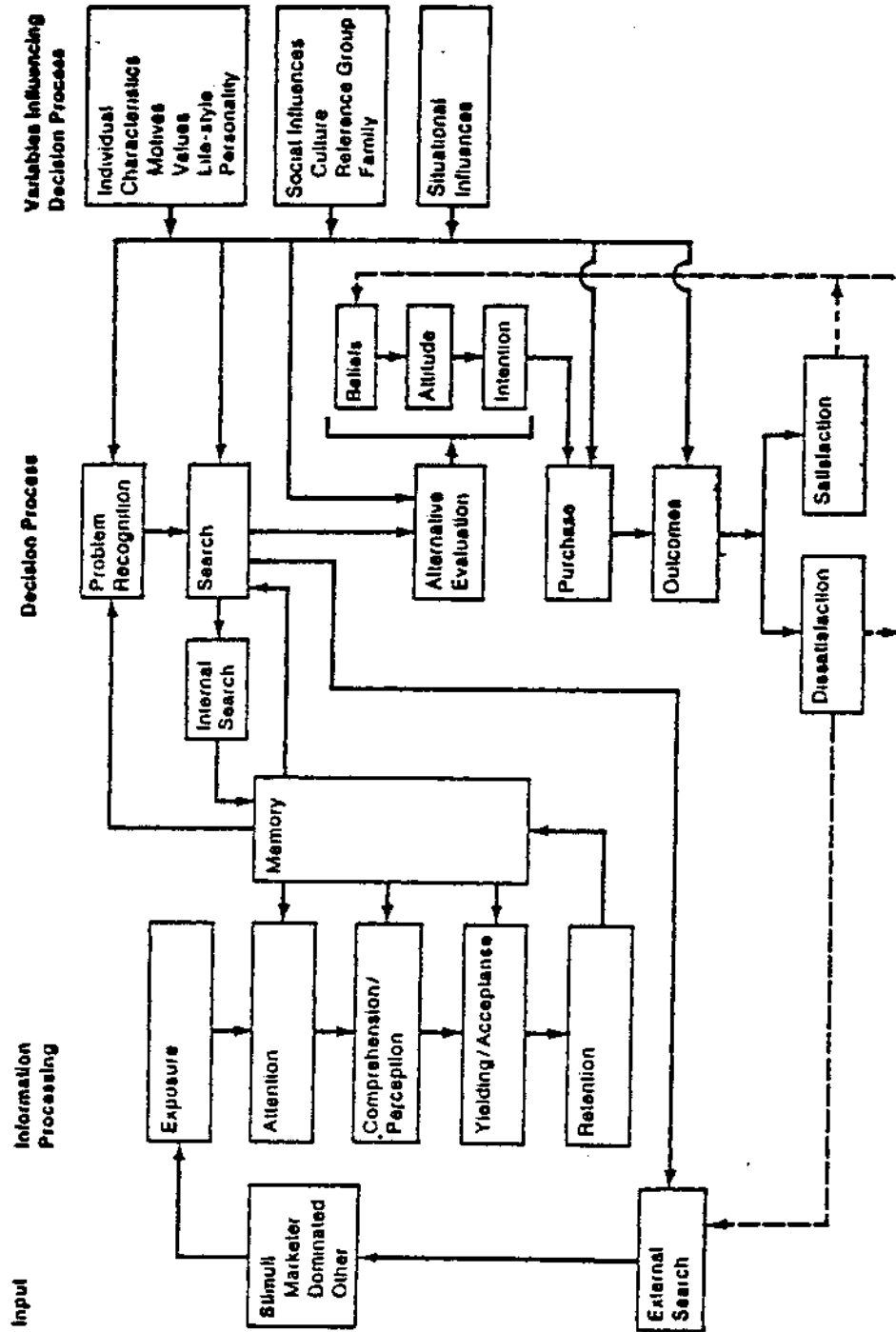
(anxiety and/or depression) and the cycle of addiction begins. When the mood state is intensified by the behavior and resulting guilt, the individual once again engages in compulsive purchasing to relieve the negative mood state. Again, the long-term effect is guilt which begins the cycle of compulsive purchasing again.

A Compulsivity Model of Compulsive Purchasing Behavior

The third proposed model of compulsive purchasing behavior was derived from the Engel-Kollat-Blackwell Model of Consumer Behavior (Engel, Blackwell, and Miniard 1986) which is depicted in Figure 3. The compulsivity model reflects the premise that this behavior is based on the compulsive personality disorder and accompanying symptoms. The model is depicted in Figure 4.

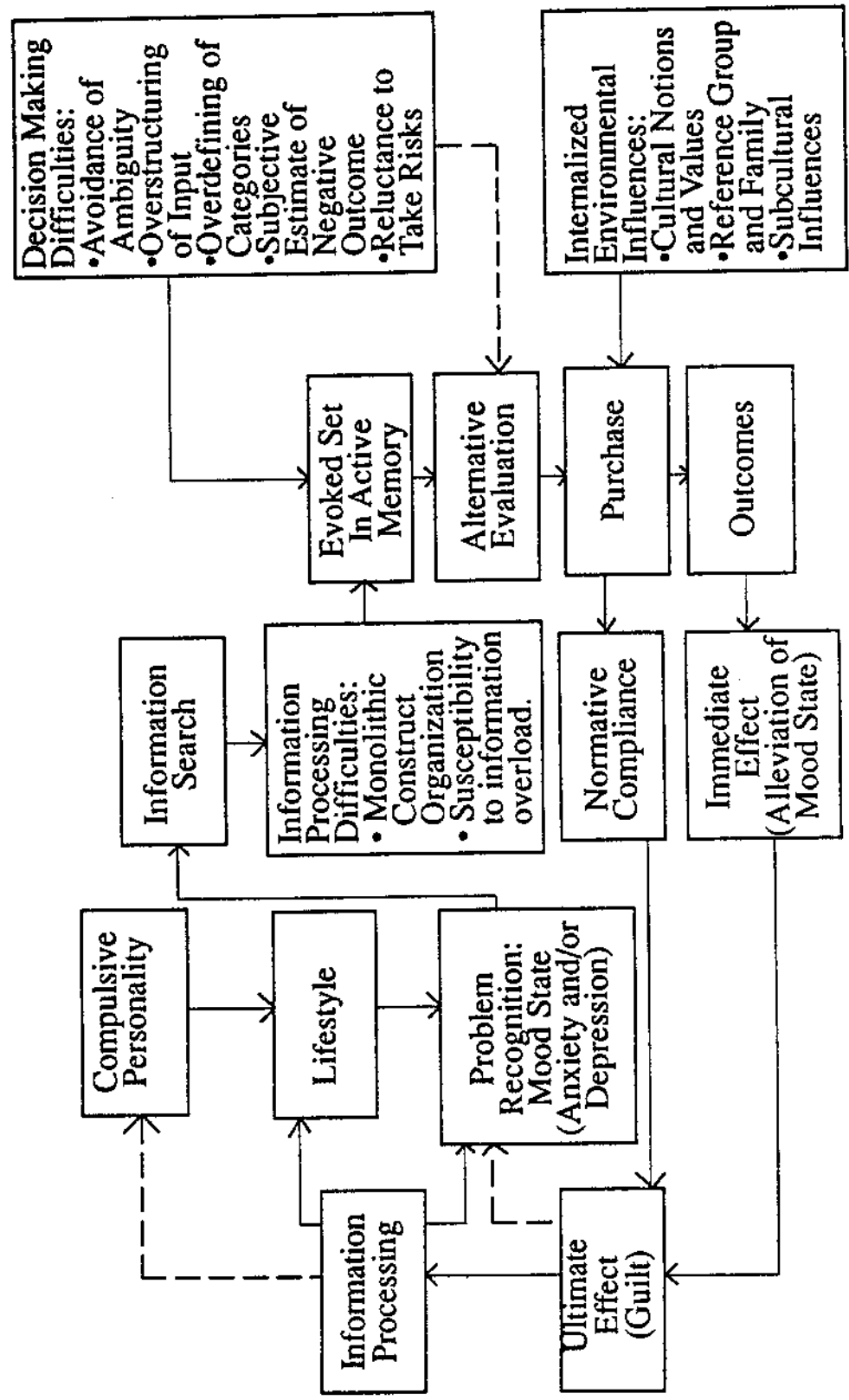
Many key areas of difference arise when looking at compulsive purchasing behavior in the context of the EKB model. The EKB model attempts to explain consumer behavior in a brand-choice problem-solving context. The individual consumer attempts to make a choice of a brand within a product category given internal and external influences, decision-making activities, marketer-controlled stimuli, information from various sources, motives, and experience. This process satisfies a need of the consumer and maximizes the utility received.

Figure 3
Engel-Kollat-Blackwell Model of Consumer Behavior



Source: Engel, J.F., R.D. Blackwell, and P.W. Miniard (1986), Consumer Behavior, Fifth Edition, Chicago, Illinois: Dryden Press.

Figure 4
A Compulsivity Model of Compulsive Purchasing Behavior



The thrust of the model proposed in Figure 4 is different from that of the traditional EKB model described above. In compulsive purchasing behavior, the individual attempts to satisfy a need through the purchasing act itself. The choice of a particular brand is relatively insignificant in the satisfaction of this need--the alleviation of an unpleasant mood state.

As discussed in the previous two models, the stimulus in the compulsive purchasing cycle is a particular mood state--specifically anxiety and/or depression. The information-processing aspects of the EKB model are different in the compulsive purchasing situation because of the information-processing difficulties inherent in the compulsive personality. The two information-processing difficulties are monolithic construct organization and susceptibility to information overload. Monolithic construct organization is a difficulty in perceiving subtle differences in various stimuli and results in "black and white" judgments about the stimuli (Rachman and Hodgson 1980; Reed 1976). Because of the difficulty in differentiating between attributes of a stimuli, the compulsive individual groups the stimuli into categories which are "clear cut". The second difficulty is susceptibility to information overload (Rachman and Hodgson 1980). This difficulty causes these individuals to limit

the amount of information acquired prior to the purchase behavior. This would imply that these individuals will rely more heavily on active memory when making a purchase decision. Their memory will include brands allocated to the various perceptual sets (evoked, inert, and inept). Because of monolithic construct organization, these sets will be clearly defined as to acceptable and unacceptable brands. Therefore, it appears that, within any given product category, the brand decision in a compulsive purchasing situation may be a relatively clear-cut decision among available brands in the evoked set.

There are several decision-making difficulties present in the compulsive personality disorder. These difficulties include: a) avoidance of ambiguity; b) overstructuring of input; c) maladaptive overdefining of categories and boundaries; d) abnormally highly subjective estimate of the probability of an unfavorable outcome of the decision; and, e) reluctance to take risks (Beech and Liddell 1974; Millner 1971; Rachman and Hodgson 1980; Reed 1976; Volans 1976). These difficulties combined with information processing difficulties reinforce the compulsive purchaser's reluctance to limit external search and to rely on information contained in memory.

The problem recognition stage of the decision process in the compulsive purchasing situation is hypothesized to

rely heavily on the satisfaction-experience feedback loop of the EKB model. The individual engages in purchasing behavior to escape from the unpleasant mood or emotion. The result of the purchasing behavior is the alleviation of the unpleasant emotion. However, the guilt which occurs because of excessive purchasing behavior increases the initial negative emotion. This is a modified form of dissonance presented in the EKB model.

The feedback of guilt into the problem recognition stage is an important component of the model. This results in a cycle which is similar to that presented in the addiction model in Figure 2. It appears that a learning process would occur in which the individual would realize that the purchasing behavior would eventually result in guilt and increased anxiety and/or depression. However, other characteristics of compulsive personalities include the inability to tolerate discomfort or postpone gratification and the gluttonous urge for fulfillment (Rachman and Hodgson 1980). Therefore, the individual will act in the short-run to relieve the negative state regardless of potential future discomfort.

The product-brand evaluation stage of the EKB model does not play a key role in the cycle of compulsive purchasing behavior. As previously discussed, purchasing behavior is the key to the satisfaction of the individual's

need in compulsive purchasing behavior. Therefore, the particular product(s) purchased will be based on past experience with this type of behavior. Specifically, products will be purchased which have served to alleviate the negative emotion in the past. The results of the Glamour survey (Jacoby 1986) showed that compulsive shoppers concentrate on a single product category when engaging in this behavior. For female compulsive shoppers, this product category is clothing, while for male compulsive shoppers, the product categories are cars, electronic gadgets, and hardware. The particular brand within the product category will be chosen from a very structured evoked set based on acceptable alternatives available in the purchasing situation.

The general motivating influences presented in the EKB model are motives, personality, lifestyle, and normative compliance. The major motive of the compulsive purchaser is to relieve the negative mood state. The personality characteristics inherent in the compulsive personality are at the heart of the compulsive purchasing cycle. Therefore, in contrast to previous research conducted on the role of personality in consumer behavior (Crosby and Grossbart 1984; Horton 1979; Kassarjian 1971), personality plays a primary role in compulsive purchasing behavior in this model. The difficulties accompanying the compulsive personality lead to

the type of behavior which is under investigation in the proposed model. Lifestyle is an important factor from the standpoint of acting as a possible trigger for the negative mood state. Normative compliance is an important factor, but is possibly not a strong motivating influence. Compulsive purchasers are very cognizant of the opinions of significant others. However, they are not usually concerned with their opinions until after the purchase has been made (Bernikow 1985), since they are very sensitive to criticism (Turner, Steketee, and Foa 1979). Many compulsive purchasers will hide their purchases from their significant others to avoid censure (Bernikow 1985). As in other type of excessive behaviors (alcoholism, bulimia, and anorexia), a symptom of the problem is the inability to admit the behaviors to significant others (Coleman, Butcher, and Carson 1984).

Internalized environmental factors which influence consumer behavior include cultural notions and values, reference groups, and family. In the case of excessive behaviors, cultural notions and values influence the type of behavior which is appropriate (Rachman and Hodgson 1980). One of the prevalent values of the American culture is materialism. Therefore, it is acceptable in this culture to escape negative emotions through shopping behavior (Jacoby 1986). Subcultural differences may influence the

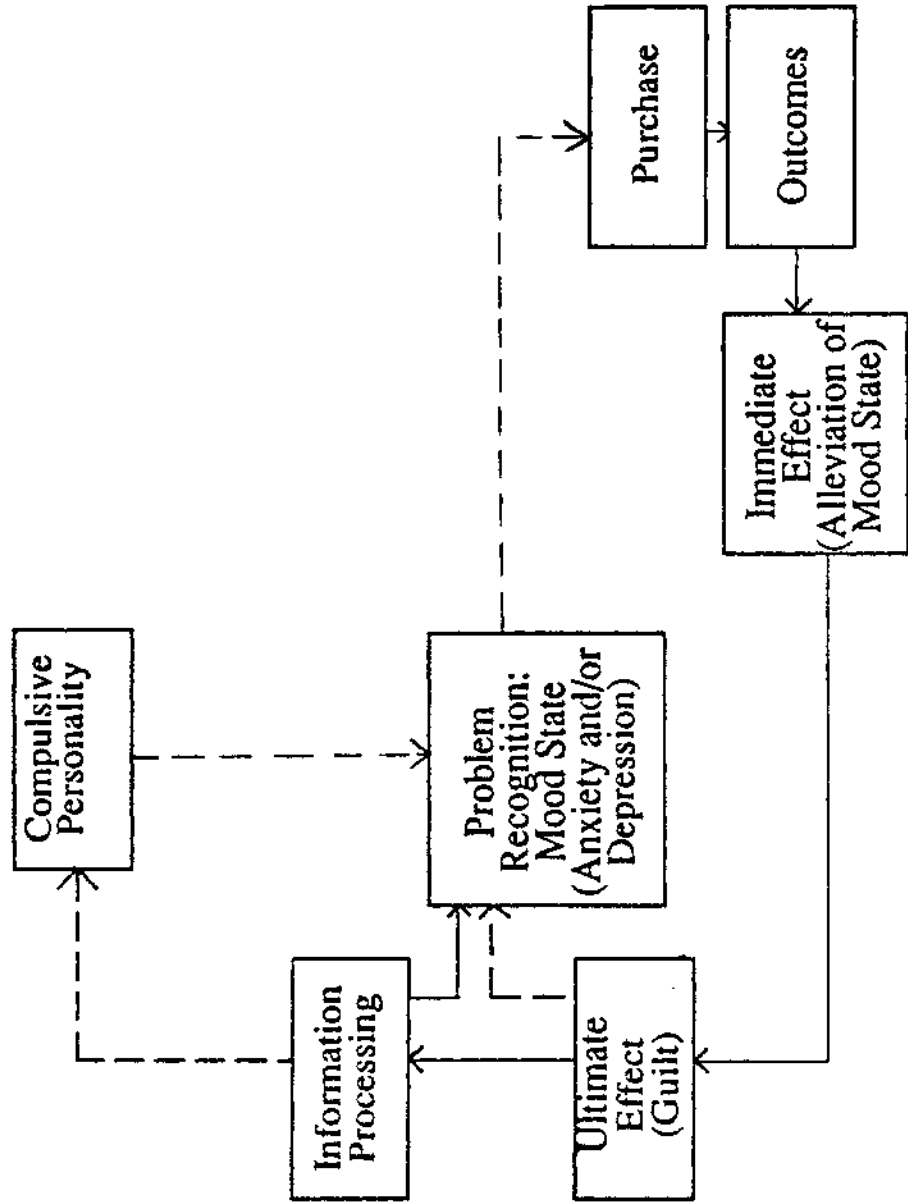
appropriateness of this behavior. Reference group and family influences may also affect the appropriateness of this escape mechanism.

The specific aspects of the compulsivity model which were examined in this study are depicted in Figure 5. The models presented represent a hierarchy of explanations; that is, the alternative explanations are not mutually exclusive. If the compulsivity model were supported, it is possible that the other two are also supported, since an addictive cycle and a learning process are incorporated into this model. The addiction model also incorporates the learning model into the process.

Operationalization of the Models

The models were operationalized through the administration of scales in the Millon Clinical Multiaxial Inventory (MCMI-II). The MCMI-II is a validated personality inventory which measures specific personality constructs in both transient and enduring states. The inventory is composed of 175 true-false self-report items and takes approximately 30 minutes to administer (Widiger, Williams, and Spitzer 1985). The scales on the MCMI-II which were used in this study are anxiety, depression, and compulsivity. The scores of compulsive purchasers on these scales were compared with the scores of a group of alcoholics and a group of compulsive overeaters to test the

Figure 5
Factors in the Compulsivity Model to be Examined



hypotheses concerning the learning model, the addiction model, and the compulsivity model.

Hypotheses

The following substantive hypotheses and sub-hypotheses were tested:

- I. Compulsive purchasers will not score significantly different from the alcoholics or the compulsive overeaters on the compulsivity scale.
- II. There is an addictive process present in the compulsive purchasing cycle.
 - a) Compulsive purchasers will report a higher level of guilt after compulsive purchasing behavior of a service than either the alcoholics or the compulsive overeaters.
 - b) Compulsive purchasers will report a higher level of guilt after compulsive purchasing behavior of a durable than either the alcoholics or the compulsive overeaters.
 - c) Compulsive purchasers will report a higher level of guilt after compulsive purchasing behavior of a nondurable than either the alcoholics or the compulsive overeaters.
 - d) Compulsive purchasers will report a greater tendency to feel depression after feeling guilt than either the alcoholics or the compulsive overeaters.

- e) Compulsive purchasers will report a greater tendency to feel anxious after feeling guilt than either the alcoholics or the compulsive overeaters.
- f) Compulsive purchasers will report a greater propensity to engage in purchasing behavior after the feeling of guilt and subsequent depression than either the alcoholics or the compulsive overeaters.
- g) Compulsive purchasers will report a greater propensity to engage in purchasing behavior after the feeling of guilt and subsequent anxiety than either the alcoholics or the compulsive overeaters.

III. There is a learning process present in the compulsive purchasing cycle.

- a) The stimulus which facilitates the learning process is anxiety or depression or both.
 - 1) Compulsive purchasers will not score significantly different from the alcoholics or the compulsive overeaters on the depression scale.
 - 2) Compulsive purchasers will not score significantly different from the alcoholics or the compulsive overeaters on the anxiety scale.
- b) There is reinforcement present in the compulsive purchasing cycle.
 - 1) Compulsive purchasers will report a greater

decrease in anxiety immediately after purchasing than either the alcoholics or the compulsive overeaters.

- 2) Compulsive purchasers will report a greater decrease in depression immediately after purchasing than either the alcoholics or the compulsive overeaters.

Significance of the Study

The understanding of the cycle of compulsive purchasing has applications for consumers, credit-granting institutions, and marketing institutions concerned about fostering social responsibility. Consumers engaging in compulsive purchasing behavior frequently encounter financial difficulties. These difficulties arise from the use of credit to extend purchasing power. Credit problems can lead to bankruptcy and the stealing of money from friends, relatives, and employers (Brandt 1987; Jacoby 1986). Many compulsive shoppers have credit card debts which approach 50 percent of their income (Brandt 1987; Jacoby 1986). This unmanageable debt is a symptom of the compulsive purchasing cycle.

As a result of the credit problems associated with compulsive purchasing behavior, several self-help support groups have been formed. Among them are Spender Menders based in San Francisco (Brandt 1987) and Debtor's Anonymous

based in New York City (Tkac 1987). Other organizations modeled after these programs have been started in the Dallas-Fort Worth area. These programs use behavior modification to attempt to break the compulsive purchasing cycle (Brandt 1987). A better of understanding of the cycle of compulsive purchasing will lead to programs which can effectively counsel consumers who are having difficulty dealing with pressures in the marketplace and to credit management education programs which can prevent this type of behavior from becoming an acceptable method of handling anxiety and depression.

One compulsive purchaser who finally had to seek counseling to overcome her debt problems reported that she was bombarded by applications for credit cards and loans when she started her first job. She attributed the easy availability of credit as a driving force urging her to buy in excess (Brandt 1987). The practice of soliciting credit through the mail by credit-granting institutions brings the question of social responsibility into the issue of compulsive purchasing behavior.

Several scholars have raised the issue of the social responsibility of business organizations to consumers. Among these scholars is Lazer (1969) who anticipated problems occurring in a growth-oriented and consumption-oriented society. He predicted that "consumers

will find that their financial capabilities for acquiring new products are outstripping their natural inclinations to do so" (p. 7). As a result, he asserted that marketing must be viewed as a force that both expands and stabilizes consumption. Holbrook (1986) agrees with Lazer by stating ". . . regardless of any managerially relevant effects on buying outcomes, the consumption experience constitutes an important component of social welfare and the quality of life that deserves study in its own right" (p. 22). Robin and Reidenbach (1987) claim that the effects of the exchange on the environment must be considered in strategy formation. Wallack (1984) proposes a model for the integration of marketing principles into the prevention of societal problems, such as alcoholism, cigarette use, diet, and exercise. This approach would seem to work well in the context of compulsive purchasing behavior. The institutions granting credit are susceptible to the same standards of social responsibility as are those institutions who facilitate the exchange of products that possibly have harmful effects on consumers.

Therefore, an understanding of the compulsive purchasing cycle could aid companies in developing marketing programs exhibiting social responsibility. Companies in various industries have initiated "demarketing" or socially responsible education programs when the products produced by

the companies have shown potential danger to society. A recent example of this type of program is the "Know When to Say When" advertising campaign by a major beer producer. If institutions were to recognize the harmful effects of current credit-granting practices to certain groups of consumers, it is possible that they could also conduct their own form of "Know When to Say When" campaigns. The contribution of this study is to demonstrate the nature of the compulsive purchasing cycle, which will, in turn, give a clearer direction to the modification of this behavior and to the responsibilities of credit-granting and marketing institutions to society where compulsive purchasing is concerned.

Limitations of the Study

1. The people to be included in the study have recognized they have a problem with compulsive purchasing and are in support groups. These individuals may exhibit behavior patterns which differ from compulsive purchasers who have not yet recognized they have a problem.

2. The scope of this study does not extend to the antecedent conditions which lead to the anxiety and/or depression.

3. The scope of this study does not extend to the type of conditioning which is taking place, such as operant vs. classical.

4. The scope of this study does not extend to the examination of the cultural influences on compulsive purchasing behavior.

The limitations of the study did not lessen the potential contribution of the study to body of knowledge in marketing. Studying individuals in self-help groups is a commonly accepted practice in psychology and is helpful in determining factors which are related to a problem in the early stages of research on the issue. The other limitations narrow the scope of the study to research associated with the models which have been presented. The issue of the antecedent conditions which lead to the anxiety and/or depression lies outside the domain of marketing and has been heavily researched by psychologists. The type of conditioning which is taking place in the process and the cultural influences on this process are both important issues which deserve separate research efforts.

Assumptions of the Study

The assumptions underlying this study are delineated below.

1. The consumer does not have unlimited discretionary income.

2. The compulsive purchaser eventually uses a significant amount of credit to support the shopping habit.

3. The compulsive purchaser exhibits symptoms which are

common to other addictions such as alcoholism and compulsive overeating.

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CHAPTER II

SYNTHESIS OF RELATED LITERATURE

The issue of compulsive shopping incorporates concepts from the disciplines of psychology, sociology, and marketing. In this chapter, literature relevant to understanding each concept included in the models presented in Chapter I is examined. Particular note is taken of the increasing interest in research which extends and modifies the current rational decision-making emphasis currently prevalent in consumer behavior. This interest is important since the research examines behavior which cannot be explained by current brand choice decision-making models. In addition, specific topic areas related to the models are examined in detail. These topic areas include mood states, anxiety, depression, learning theory, addiction theory, the compulsive personality, and credit issues.

The Changing Direction of Consumer Behavior Research

Several researchers in the area of consumer behavior, including Sheth, Jacoby, Arndt, and Bristor, have asserted that there is a lack of research focusing on consumer behavior patterns which may not fit the traditional rational decision-making models currently dominating the discipline.

Although rational choice behavior research still represents the majority of research, selective efforts are directed toward the study of non-traditional behavior patterns. The purchasing and consumption behavior of a consumer engaging in compulsive purchasing would fall into the latter category. For this reason, an examination of this research is included in the current discussion.

Sheth (1979) is a proponent of more research directed toward non-problem solving situations. He calls for additional research in several areas including deviant consumer behavior. Deviant behavior includes such topics as shoplifting, fad and fashion patronage, and obsessive consumer behavior such as obesity, alcoholism, and drug addiction. Compulsive purchasing would be classified as deviant consumer behavior. The current rational approach to consumer behavior does not explain deviant consumer behavior. Sheth asserts that the decision-making perspective may, in fact, explain a relatively small proportion of total consumer behavior phenomena. Bristor (1985) also took this view when claiming that with the emphasis on the rational consumer perspective, "it is not surprising that researchers are typically only able to explain a small amount of variance in their dependent variables" (p. 302).

In an address to the Association for Consumer Research, Sheth (1985) called for more research into areas other than brand choice behavior. Arndt (1976) agrees that there has been too much emphasis on brand choice research. Sheth (1985) suggested three specific areas in need of additional research: procurement behavior, consumption behavior, and disposal behavior. He claims that consumer behavior is in the midst of its "midlife crisis" and the direction must change to get through this crisis. Several other marketing scholars also agree with Sheth's assertions. Jacoby (1978) assessed the area of consumer behavior and concluded that researchers must begin to explore the entire realm of consumer acquisition decisions and behavior. Olshavsky and Granbois (1979) wrote that for research to remain applicable, more information on behavior which does not involve prepurchase decision-making must be generated. Through a synthesis of research on prepurchase behavior, he suggested that a substantial proportion of purchases does not involve decision making, even on the first purchase. He believes that this continuing emphasis on decision making displaces research effort which may be better directed toward other important kinds of consumer behavior.

Several marketing scholars have heeded the calls for research into areas other than prepurchase brand choice consumer behavior. Markin (1979) presented arguments that a

great deal of consumer behavior does not involve rational decision-making, but postpurchase rationalization that a rational decision process was used to arrive at the brand choice. This rationalization by the consumer results in the alleviation of postpurchase dissonance. He asserts that the predominant consumer decision process approach is a normative one. Furthermore, several other researchers have examined the role of affective states in consumer behavior (Ahtola 1985; Hirschman and Holbrook 1982; Holbrook 1986; Holbrook and Hirschman 1982; Venkatraman and MacInnis 1985; Zajonc 1980). These authors agree that the current emphasis on brand choice processes must be supplemented and enriched by research directed at other aspects of consumer behavior.

The current research effort is an example of the type of research these authors feel is needed to expand and enrich the current knowledge in consumer behavior. Compulsive buying behavior cannot be adequately explained using current theories of brand choice behavior. To adequately explain this behavior, the areas of emotion, learning theory, addiction theory, and the compulsive personality must be explored. These concepts are discussed in the following sections.

.Mood States

Mood, as a construct, is a state of mind determined by temporarily prevailing emotions. Becker (1974) stated that

mood can be thought of as a barometer of ego state or an indicator of how the individual experiences the quality of his present existence. Branden (1969) defined emotion as the feeling which is comprised of an individual's estimate of the beneficial or harmful relationship of some aspect of the reality to himself. Becker (1974) suggested that emotion can be differentiated from mood in terms of breadth or generality. While moods are pervasive, emotions are relative transient and specific to particular contexts.

Mood states have received very little attention with respect to their potential effect on consumer behavior. According to Gardner (1985) researchers have often used the term "antecedent state" to refer to all temporary financial, psychological, and physiological factors which are in place when the consumer enters the marketplace. However, moods can influence the affective, cognitive, and behavioral components of a consumer. Bower (1981) studied the effects of positive and negative moods and concluded that a particular mood state can affect associative process (free associations and semantic elaboration), interpretive processes, selective attention, and selective learning. As noted by Gardner and Vandersteel (1984) and Park, Gardner, and Thukral (1982), a particular mood state appears to play an important role in information encoding, retrieval, and information processing. Furthermore, Clark and Isen (1982)

indicate that feeling states need not be extremely intense to be potent enough to influence an individual's ongoing behavior.

Several studies have examined the specific behavioral effects of mood states. Behaviors which have been demonstrated to be associated with mood states include: 1) helping and generosity (Aderman 1972; Berkowitz and Connor 1966; Cialdini and Kendrick 1976; Donnerstein, Donnerstein and Munger 1975; Isen 1970; Isen and Levin 1972; Isen, Horn, and Rosenhan 1973; Moore, Underwood, and Rosenhan 1973; Mischel, Coates, and Raskoff 1968; Regan, Williams, and Sparling 1972); 2) selection and timing of self-imposed reinforcement (Moore and Clyburn 1976; Seeman and Schwarz 1974; Underwood, Moore and Rosenhan 1973); 3) resisting temptation (Fry 1975); 4) choice of information to process (Isen and Simmonds 1978); and 5) impulsive consumer buying (Weinberg and Gottwald 1982).

Studies have also been conducted on the affective reactions and judgments of particular mood states. Specifically, these studies revealed associations between positive or negative mood states and the following affective reactions or judgments: 1) sense of humor (Laird 1974); 2) ratings of particular stimuli (Isen and Shalcker 1982; Isen, Shalcker, Clark, and Karp 1978); 3) expected enjoyableness of

activities (Carson and Adams 1980; Masters and Furman 1976);
4) life satisfaction (Schwarz and Clore 1983).

The direction of a mood state and its subsequent effects on cognitions, behaviors, and affective states has been well documented. However, relatively little research has focused on the specific effects of feeling states on the three areas. In the following sections, the two feeling states which are deemed relevant to research in compulsive buying behavior, anxiety and depression, are discussed.

Anxiety

Greist, Jefferson, and Marks (1986) defined anxiety, as a construct, in terms of a response to an ill-defined, irrational, distant, or unrecognized source of danger involving an unpleasant state of mental or psychological tension often accompanied by physical or physiological symptoms. Hilgard, Atkinson, and Atkinson (1979) characterized anxiety with terms such as "worry," "apprehension," "dread," and "fear." Bellack and Lombardo (1984) observed that anxiety can be differentiated from fear by the degree to which the threatening agent can be identified. Anxiety would be the response a social phobic would have when encountering a social situation.

Anxiety produces many identifiable symptoms in the individual. These symptoms include: 1) feelings of physical and mental helplessness (Greist, Jefferson, and Marks 1986);

2) vague feelings of terror, threat, or impending catastrophe (Bellack and Lombardo 1984); 3) physical symptoms--sweating, racing or pounding heart, cold, clammy hands, dry mouth, dizziness, light-headedness, numbness and/or tingling in the hands or feet or other parts of the body, upset stomach, hot or cold spells, frequent need to urinate, diarrhea, discomfort in the pit of the stomach, lump in the throat, flushing, pallor, and a high pulse and respiration rate (Coleman, Butcher, and Carson 1984; Greist, Jefferson and Marks 1986).

There are several variations of anxiety. Menasco and Hawkins (1978) described anxiety as either trait or state. Trait anxiety exists when it becomes a stable characteristic of an individual's personality. State anxiety is transient and occurs as a response to a particular stimulus. Objective anxiety, as discussed by Bellack and Lombardo (1984), is the response to a realistic threat while neurotic anxiety is an irrational response to an internal conflict which has no basis in fact. Greist, Jefferson, and Marks (1986) described several categorizations of anxiety. Anxiety that occurs regardless of the situation is termed spontaneous anxiety. Anxiety which occurs only in particular situations is called situational or phobic anxiety. If the anxiety is triggered by merely thinking of particular situations, it is referred to as anticipatory

anxiety. Anxiety also has degrees of intensity. It can range on a continuum from a mere qualm to intense panic. The duration of anxiety can range anywhere from a few seconds to several days.

There are several evolving theories of anxiety. In psychoanalytic theory, anxiety is thought to represent a conflict hidden beneath the level of conscious awareness. According to Greist, Jefferson, and Marks (1986), these conflicts arose from feelings of discomfort, sex, or aggression in the child. The intense conflict between id impulses and the constraints imposed by the ego and superego lead to the anxiety. Hilgard, Atkinson, and Atkinson (1979) suggest that since this occurs below the level of consciousness, the individual is unable to pinpoint the source of his anxiety.

Learning theorists believe that anxiety is a learned behavior which can be unlearned. Greist, Jefferson, and Marks (1986) noted that during childhood, anxiety-reducing behaviors are learned and are sometimes very difficult to extinguish. The adult has learned to avoid the anxiety-producing situation and, thus, never gets a chance to find out that the situation is no longer dangerous. The avoidance of the anxiety-producing situations is very often accomplished through the use of both healthy and unhealthy strategies. Unhealthy defensive strategies include alcohol

abuse, repression, denial, or compulsive gambling. Attempts to deal directly with the anxiety-producing situation are called coping strategies and are considered healthy approaches to dealing with anxiety. Most individuals use some combination of defensive and coping strategies to deal with anxiety. When defense mechanisms become the dominant mode of responding to anxiety, they indicate personality maladjustment. Hilgard, Atkinson, and Atkinson (1979) observed that the neurotic individual tends to be less flexible, using the same defense mechanism regardless of the situation.

Freud recognized a characteristic in his patients which suffered from neurotic anxiety which he called the neurotic paradox. The use of defensive strategies to relieve anxiety often appears to be maladaptive and self-destructive, especially when a single defensive strategy is used regardless of the situation. This contradicts the basic assumption that behavior is directed to the maximization of pleasure and the minimization of pain. Coleman, Butcher and Carson (1984) describe this paradox, which is reflected in the addictive and compulsivity models presented earlier, is explained below.

The seeming paradox is resolved when we recognize that the self-defeating nature of neurotic behavior usually becomes clear only after some time has elapsed. By contrast, the immediate effect of the behavior is to reduce anxiety and permit the individual to retain a measure of psychic comfort in the present situation. . .

Since the typical effect of these defensive reactions is to make matters more complicated and less solvable, the neurotic person tends ultimately to get more deeply into trouble. The unfortunate consequences are due in no small measure to the fact that accurate perception of events is made difficult due to conditions of high anxiety and to the complications introduced by the person's neurotic attempts to contain the anxiety (p. 190).

The impact of anxiety on consumer behavior has received some attention from researchers. It is, in fact, one of the few feeling states which has been specifically examined for its effect on consumer behavior. Kimble and Garnezy (1968) asserted that anxiety profoundly influences behavior. As a result, many researchers have examined the effects of induced anxiety through advertisements on subsequent consumer behavior (Aaker and Myers 1982; Golden and Johnson 1983; Kahnemann 1973; Kroeber-Riel 1979; Ray and Batra 1983; Resnick and Cabellero 1984). Hill (1987) asserted that conditions of anxiety may cause an individual to select anxiety reduction as the primary motivation when evaluating products for purchase. This would result in simple decision-making strategies which involve little information search or processing. Furthermore, Janis and Mann (1977) hypothesized that immediate need for anxiety reduction could result in rushed decision making.

The current research does not attempt to determine the cause of anxiety, but examines the association of the presence of anxiety with the choice of a specific defensive

strategy--compulsive buying. A closely related mood state, depression, will be examined in the following section.

Depression

Depression lies on a continuum from situational depression to psychotic and bipolar depression. As observed by Coleman, Butcher, and Carson (1984), situational depression is that which would be expected to occur in anyone undergoing certain traumatic but rather common life events, such as significant personal or economic losses. Psychotic depression, as interpreted by Hilgard, Atkinson, and Atkinson (1979), is a feeling which is characterized by continuing sadness and dejection that is out of proportion to any precipitating event. The focus of the current study will be on mild, or low level chronic, depression.

In most cases, individuals suffering from mild depression will not seek help from a mental health professional. The reason for this, according to Coleman, Butcher, and Carson (1984), is that the depression is viewed as "normal" and as a response to a stressor. The symptoms of mild depression include: 1) a feeling of greater intensity than sadness (Arieti 1978; Becker 1974); 2) the individual does not want to have such a feeling (Arieti 1978); 3) pessimism or hopelessness (Arieti 1978; Becker 1974; Brown and Harris 1978); 4) feelings of worthlessness and self-depreciation (Arieti 1978; Becker 1974; Brown and

Harris 1978; Lewinsohn, Youngren, and Grosscup 1979); 5) psychosomatic and somatic symptoms, such as change in appetite and eating habits, noticeable weight loss, sleep dysfunction, fatigue, change in sexual libido, constipation, aches, weakness, and lowered activity level (Arieti 1978; Becker 1974; Lewinsohn, Youngren, and Grosscup 1979); 6) irritability and anger (Arieti 1978; Becker 1974); 7) an insatiable desire to get or obtain (Arieti 1978); 8) impaired thought processes with high distractibility, indecisiveness, and disinterestedness (Becker 1974); 9) guilt (Lewinsohn, Youngren, and Grosscup 1979); and, 10) social isolation (Lewinsohn, Youngren, and Grosscup 1979).

Becker (1979) reported two personality types among depressives: 1) a more passive dependent type whose self-esteem is regulated largely by feelings of being loved; and, 2) a more obsessional type whose self-esteem is regulated largely by feelings of having done the right thing. He bases his discussion of depression on the damage of the self-esteem of the individual. Many others agree with him in these views. Arieti (1978) states that depression is a conscious reaction to the loss of a state of well-being which results in a negative view of the world, the self, and the future. Brown and Harris (1978) described the central core of depression in terms of the self seeming

worthless, the outer world meaningless, and the future hopeless.

There are several theories of depression which correspond very closely with those of anxiety. Hilgard, Atkinson, and Atkinson (1979) reported that the psychoanalytic theory of depression focuses on loss, overdependence on external approval, and anger turned inward. These feelings stem from the loss of the mother's affection in childhood.

The learning theory of depression focuses on reduced positive reinforcement as the cause of the mood (Carson and Adams 1980; Lewinsohn, Youngren, and Grosscup 1979). Becker (1979) reported that depressives may have excessively high standards for self-reinforcement. Lewinsohn, Youngren, and Grosscup (1979) suggest a multicausation model for depression in which many antecedent conditions work with the reinforcement model to cause depression. These antecedent conditions include: 1) support and quality of interpersonal relationships; 2) loss of mother by death or separation before the age of 11; 3) having three or more children aged 14 or less at home; and, 4) lack of full- or part-time employment.

The concept of learned helplessness is a modification of the learning theory which places more emphasis on cognitive factors in depression. Hilgard, Atkinson, and

Atkinson (1979) discuss this view which hypothesizes that individuals become depressed when they believe that their actions make no difference in bringing about either pleasure or pain. Therefore, depression would be a belief in one's own helplessness.

According to Hallam (1985) and Greist, Jefferson, and Marks (1986), the mood states of anxiety and depression often occur together in an individual. It is for this reason that they are included together in the model. Gersh and Fowles (1979) discussed four types of depressions, one of which was anxious depression. This group showed the highest level of psychic and somatic anxiety, depersonalization, obsessional symptoms, and fatigue. They were also mildly depressed. Hallam (1985) hypothesized that the defense strategies used to cope with anxious depression often varied by sex--men often abuse alcohol while women tend to isolate themselves in the home.

The interrelated constructs of anxiety and depression will be treated as antecedent conditions to compulsive purchasing in the current research. Since they are interrelated, it is hypothesized that they will both be present in some individuals with this problem, while in other compulsive purchasers, either anxiety or depression will be present. The processes which occur with the anxiety and/or depression--learning, addiction, or compulsive

personality traits--will be discussed in the following sections.

Learning Theory

As defined by Bower and Hilgard (1981), learning is a change in an individual's behavior or behavior potential in a given situation brought about by the individual's repeated experiences in that situation. Hilgard, Atkinson, and Atkinson (1979) described learning simply as a relatively permanent change in behavior that occurs as the result of prior experience. Learning is an important concept in the study of consumer behavior. Consumers learn through use of products, through watching others consume products (as in an advertisement), through product-related information, and through their socialization as a consumer in the early years of their lives. The learning which takes place influences the brands which they choose in the marketplace.

A learning process also takes place in the choice of coping or defensive strategies in the presence of anxiety or depression. The first model presented in this study focuses on the role of learning in the choice of a defensive strategy--compulsive purchasing. Three learning theories--classical conditioning, operant conditioning, and habitual learning--are reviewed in the following sections.

Classical Conditioning

Classical conditioning is a form of learning that is also referred to as classical, association, respondent, and stimulus-response learning. Bower and Hilgard (1981) summarize the first research conducted by Ivan Pavlov in the area of classical conditioning. In his famous experiments, he found that dogs could be made to salivate when given stimuli other than food. By associating food (unconditioned stimulus) with the sound of a bell (conditioned stimulus), Pavlov soon elicited salivation from the dogs when he rang the bell alone.

Several key characteristics of classical conditioning have been identified by researchers in the area. Mellot (1983) describes the first characteristic, extinction, as an unlearning process that occurs when, over a period of time, a learned response occurs with no reinforcement. Glaser (1971) reports the second characteristic, reinforcement, as an event, stimulus, or state of affairs that changes subsequent behavior when it follows an instance of that behavior. Mellot (1983) examines several other characteristics of classical conditioning. Repetition, the third characteristic, refers to the fact that the more a conditioned stimulus and an unconditioned stimulus are presented together, the faster learning takes place. The concept of contiguity, the fourth characteristic, states

that learning occurs faster when the conditioned stimulus is presented close to the unconditioned stimulus. The fifth characteristic, stimulus generalization, takes place when the conditioned stimulus is generalized to other objects which closely resemble that stimulus.

Bower and Hilgard (1981) report other characteristics of classical conditioning including stimulus discrimination, the sixth characteristic. This concept holds that if an unconditioned stimulus is presented with one conditioned stimulus but is not presented with another conditioned stimulus, the conditioned response will occur only with the former conditioned stimulus. The seventh characteristic inhibition, refers to the fact that a response may be conditioned which opposes the response that will occur when the conditioned response predicts the unconditioned response. McSweeney and Bierley (1984) describe the eighth characteristic of classical conditioning, higher order conditioning, in which one conditioned stimulus can be followed by an unconditioned stimulus until the response is conditioned. Then a new conditioned stimulus can be associated with the previous conditioned stimulus until the same conditioned response is achieved. The ninth characteristic, acquisition, refers to the fact that the strength of the conditioned response increases gradually with an increase in the number of pairings of the

conditioned stimulus with the unconditioned stimulus. The final characteristic as described by Coleman, Butcher, and Carson (1984), avoidance conditioning, refers to the fact that an individual may be conditioned to anticipate an aversive event and to respond in such a way to avoid the event.

Classical conditioning has received quite a bit of attention from marketing scholars. Allen and Madden (1985) provide a comprehensive review of research in classical conditioning up to that point in time. They present a classification schema for dividing the research which had been done in this area by the form of response that was investigated. This categorization results in four groups of classical conditioning research: 1) those studies which investigate the transfer of very simplistic responses controlled by the autonomic and skeletal nervous systems; 2) those studies which investigate the transference of evaluative meaning or associative learning; 3) research which examines the transfer of purely affective or emotional responses; and, 4) studies which attempt to demonstrate direct affect transfer. Recent studies which demonstrate classical conditioning principles in the marketing context include Bierley, McSweeney, and Vannieuwkerk (1985) and Gorn (1982). Both of these studies used music as the unconditioned stimulus. McSweeney and Bierley (1984)

outlined five situations in which classical conditioning does not work--overshadowing, blocking, unconditioned stimulus pre-exposure effect, latent inhibition, and the Garcia effect.

Operant Conditioning

Operant conditioning is also known by other terms such as instrumental learning, reinforcement theory, stimulus control learning, and behavior modification. Bower and Hilgard (1981) attribute the theory of instrumental learning to B.F. Skinner. His experiments involved a box in which a rat was placed. A lever on one wall of the box released food pellet when pressed by the rat. Pressing the lever delivered the reward (the food) and getting the reward when motivated by the need for food was the reinforcement. Therefore, the rat learned as a result of the reinforcement of his behavior.

There are several characteristics associated with operant conditioning. Peter and Nord (1982) describe the first characteristic, the concept of reinforcement. The use of continuous or intermittent schedules of reinforcement can influence the strength of the learning. The reinforcement may be delayed or immediate, although Rothschild and Gaidis (1981) contend that immediate reinforcement is more effective for changing behavior. The reinforcers may be primary or secondary, with Rothschild and Gaidis (1981)

contending that primary reinforcers are much more effective. The second characteristic of operant conditioning is shaping. Shaping is the use of a sequence of different responses to change the probabilities of certain behavior which will in turn increase the probabilities of other behaviors. Rothschild and Gaidis (1981) and Peter and Nord (1982) report that shaping is usually accomplished by positively reinforcing successive approximations of the desired behavior or of other behaviors that must be performed before the desired behavior can be emitted. Rothschild and Gaidis (1981) also discuss the final characteristic of operant conditioning, extinction, which is the removal of the association between a response and a reward.

Behavior modification and operant conditioning principles have also been discussed by many marketing scholars (Carey, Clicque, Leighton, and Milton 1976; Engel, Blackwell and Miniard 1986; Kassarian 1978; Nord and Peter 1980; Ray 1973). In fact, Peter and Nord (1982), Rothschild and Gaidis (1981), and Bergiel and Trosclair (1985) have pointed out the similarities between operant conditioning and the marketing concept.

Both of the above learning theories are ones which emphasize a conditioning process. This process evokes responses based on associations or reinforcement. Bergiel

and Trosclair (1985) perceive the difference between the two theories to lie in the amount of control the individual has in the conditioning process. In classical conditioning the responses are involuntary, while in operant conditioning the responses are consciously controlled. Nord and Peter (1980) report the difference in the timing of the responses. In classical conditioning the stimulus occurs before the response, while in operant conditioning the stimulus occurs after the response. Bergiel and Trosclair (1985) summarize the difference between the two types of learning. Operant conditioning is a relatively complex, goal-directed behavior, while classical conditioning is a simple behavior which is automatic and involuntary.

Habitual Learning

A learning theory which deserves special attention because of the habitual nature of compulsive purchasing is Hull's Systematic Behavior Theory. Bower and Hilgard (1981) discuss Hull's theory of learning and reduce the theory to the equation:

$$E = D \times K \times H \times V$$

Behavior is represented by E which Hull calls action potential. This potential is activated by the cumulative effect of a drive (D) multiplied by the incentive of a goal

(K) times reinforcement (H) times the intensity of the cue (V). The learning situation is depicted as the individual seeking to satisfy needs or reach certain goals while responding to specific cues in the environment. Berkman and Gilson (1978) point out that reinforcement strengthens the association between cues and responses so that the individual learns to make a similar response again when faced with a similar cue. Therefore, Mowrer (1960) described this model of learning as an extension of the theory of operant conditioning.

Miller expanded Hull's theory to attempt to explain acquired drives. Bower and Hilgard (1981) describe acquired drive as stimuli which come to possess the properties of a drive through a conditioning process. An example of an acquired drive is fear or anxiety. When the fear or anxiety stimuli become sufficiently intense, they act as driving, motivating stimuli which will arouse responses which escape or avoid those unpleasant, aversive situations that are arousing the fear or anxiety. When the conditioned response results in the removal of the fear or anxiety, that response is reinforced. Therefore, the presence of intense anxiety or fear stimuli will elicit the conditioned response in an individual.

Addiction Theory

Theories of addiction are numerous as are definitions of addiction. Hyde (1978) points out that one definition does not satisfy all cases. One reason for the diversity of definitions is the large number of addictive "substances". A review of the literature on addictions reveals several behaviors, in addition to substances, that are potentially addictive. Drug and alcohol dependence are among the substances that are normally thought of as addicting. Other physical addictions include caffeine, chocolate, nicotine, and food (Hyde 1978). Activities which have been shown to be addicting include: 1) work (Hyde 1978; Oates 1971; Oates 1981; Peele 1975); 2) gambling (Coleman, Butcher and Carson 1984; Fuller 1974; German 1976; Hyde 1978; Lindner 1974; Victor 1981); 3) overeating (Ball and Grinker 1981; Coleman, Butcher, and Carson 1984; Haber 1981; Hyde 1978); 4) child-rearing (Hyde 1978); 5) television viewing (Berger 1981); 6) sports (Cimons 1984; Glasser 1976; Hartung and Farge 1981); 7) dieting (Moore 1981); 8) donating blood and other acts of altruism (Piliavin, Callero and Evans 1982); 9) religion (Peele and Brodsky 1978); 10) pursuit of education (Peele and Brodsky 1978); and, 11) love (Peele 1975).

The characteristic that all of the above substances and activities have in common is that they are all conditioned

responses for dealing with depression or anxiety. Peele and Brodsky (1978) examined addiction from a social perspective and proposed that addiction has very little to do with the substance or activity, but is dependent upon what the individual thinks it can do for him. Hyde (1978) agrees with this view and states that people's behavior toward the activity is a major determinant of addiction.

Central to the concept of addiction is the cyclical nature of the problem. This cycle of addiction was discussed in Chapter I and is depicted in the addiction model of compulsive purchasing. France (1974) asserts that the cycle of addiction begins as a learned response to anxiety and/or depression. The link between anxiety, depression, and addictions has been substantiated by several researchers including Salzman (1981), Hyde (1978), Victor (1981), Berger (1981), Hartung and Farge (1981), Piliavin, Callero and Evans (1982), Herbert (1984), Haber (1981), Ball and Grinker (1981), and Bemporad (1978).

The intensity of the negative mood state increases the need for immediate gratification or reinforcement that is achieved through the conditioned response--the defense mechanism. Moore, Clyburn and Underwood (1976) and Seeman and Schwarz (1974) show that individuals who use defense mechanisms in this addictive cycle are unwilling to postpone reinforcement and must have immediate alleviation of the

anxiety or depression. Bandura (1969) points out that "behavior is more powerfully controlled by its immediate, rather than delayed, consequences, and it is precisely for this reason that persons may persistently engage in immediately reinforcing, but potentially self-destructive behavior." (p. 530)

The conditioned response results in the immediate alleviation of the anxiety or depression. However, Peele (1978) and Weinberg (1978) observe that the long-term effect of engaging in the addictive behavior or indulging in the addictive substance is to increase the individuals propensity to engage in that behavior again. Coleman, Butcher, and Carson (1984) describe the cycle of addiction present in alcoholism in the following excerpt:

Alcoholism is a conditioned response to anxiety. The individual presumably finds in alcohol a means of relieving anxiety, resentment, depression, or other unpleasant feelings. Each drink relieves tension; thus the behavior is reinforced. Eventually drinking becomes the habitual pattern for coping with stress. . . It seems that alcoholics drink to feel better at the moment even though they know they will feel worse later. (pp. 409-10)

When they do feel worse later, the individuals will have an increased propensity to engage in the addictive behavior. The fact that they acted may increase their depression, anxiety, or physical symptoms. For example, an alcoholic who goes on a binge will feel good during the binge, but when he wakes up with a hangover, he will often

take another drink in the morning to relieve his physical misery. Weinberg (1978), Peele (1975), Greenson (1974), and Bergler (1974) point out that the same cycle is present in the psychological addictions.

A characteristic of individuals who are addicted to a substance or behavior is grandiosity. This trait is the feeling that the individual is in complete volitional control of his actions and can discontinue abusing the substance or engaging in the behavior at any point in time. The individual recognizes that the activity/substance can be addicting, but he is above such loss of control. As observed by Salzman (1968), grandiosity is not only a characteristic of individuals who are addicted, but is also a characteristic of individuals suffering from the obsessive-compulsive personality disorder. This personality structure is reviewed in the following section.

Compulsive Personality Structure

The third model presented in the current study expands the addiction model to include compulsive personality traits and symptoms. In this model the problem of compulsive purchasing is viewed as a result of personality traits. The examination of personality and its effect on consumer behavior is an issue which has been addressed by many marketing scholars including Kassarian and Sheffet (1984), Ahmed (1972), Alpert (1972), Engel, Blackwell, and Miniard

(1986), Fry (1971), Greeno, Sommers, and Kernan (1973), Horton (1974), Horton (1979), Kassarian (1971), Perry (1973), Sparks and Tucker (1971), Swan and May (1970), Venkatesan (1970), Wells and Beard (1973), Worthing, Venkatesan, and Smith (1973), and Brody and Cunningham (1968). Personality theories applied to marketing have included psychoanalytic theory, social learning theory, stimulus-response theory, trait and factor theory, self-concept theory, and life-style theory.

The studies of personality and consumer behavior have resulted in mixed findings as to the importance of personality in consumer behavior research. Some studies indicate a strong relationship between personality and consumer behavior and some indicate no relationship. Kassarian (1971) indicates that if a relationship is shown to exist in research studies, it is so weak that it is questionable or even meaningless. Horton (1979) criticizes personality research for its use of specific brand choice and brand loyalty as dependent variables when there has been no theoretical or empirical support for this relationship. Crosby and Grossbart (1984) call for the definition and validation of personality variables that are relevant to consumer behavior.

The compulsive personality is one in which the individual has restricted ability to express warm and tender

emotions as a result of being unduly conventional, serious, formal, and stingy. The individual also exhibits perfectionism and a preoccupation with trivial details, rules, order, organization, schedules, and lists. Individuals with this disorder also insist that others submit to their way of doing things and are unaware of the feelings elicited by this behavior (American Psychiatric Association 1980).

The associated features of this personality type include considerable distress associated with indecisiveness and general ineffectiveness. Depressed moods are common when this personality type is present. These individuals are extremely conscientious, moralistic, scrupulous, and judgmental of self and others. They become very angry when they are unable to control their environment or others, although they rarely express this anger directly. They are often sensitive to criticism (American Psychiatric Association 1980).

The behavior patterns of this personality type are similar to those of the obsessive-compulsive disorder. However, in the obsessive-compulsive disorder, the individual suffers from the persistent intrusion of particular undesired thoughts or actions. These obsessions and compulsions are a source of extreme anxiety because the individual wishes to control them but cannot (Coleman,

Butcher, and Carson 1984). True obsessions and compulsions are not present in the compulsive personality type, although both can be present in an individual (American Psychiatric Association 1980).

The compulsive personality structure is also referred to as the adaptive obsessive-compulsive. Rachman and deSilva (1978) and Salzman (1968) differentiate the two conditions by stating that individuals with the adaptive obsessive characteristics are able to function on a everyday basis, but still have many of the characteristics related to the obsessive-compulsive disorder. Cammer (1976) and Salzman (1968) describe the characteristics of the adaptive obsessive-compulsive as: 1) perfectionism; 2) need for control; 3) orderliness; 4) hoarding; 5) compulsion to work; 6) single-mindedness; 7) anxiety; and, 8) depression. Cammer's (1976) summary of the differences between adaptive obsessive-compulsives and maladaptive (or neurotic) obsessive-compulsives is shown in Table 2.

Cammer (1976) and Schwartz (1982) point out several addictions which have been related to the adaptive obsessive-compulsive personality structure. These addictions include: 1) the houseproud man or woman; 2) collectors and accumulators; 3) compulsive eaters; 4) compulsive smokers; 5) compulsive gamblers; 6) compulsive

Table 2

Differences Between the Adaptive Obsessive-Compulsive
and the Neurotic Obsessive-Compulsive

THE ADAPTIVE O-C	THE OBSESSIONAL NEUROTIC
You know that you are precise, orderly, conscientious and perfectionist. You approve of your traits.	You know that you are suffering from and trying to resist your intrusive thoughts, ritual acts, phobias, self-doubts, and vacillations.
You are proud of your rigid, disciplined and controlling behavior.	You find your obsessions and rituals depressing, unpleasant, burdensome, and time-wasting.
You enjoy your attention to detail and order, constantly examining and reinforcing it.	You try to camouflage your need to check and recheck, and dislike your repetitive and avoidance behavior
You rarely doubt reality and are righteously sure of your rational approach to life and people.	You are uncertain of your sanity and painfully troubled by your recurrent doubts of reality.
You are productive, take pleasure in your work, and feel no need to apologize for your unbending ways.	You have insight into your compulsions as silly, unproductive and handicaps, but they must be discharged.
You feel in command of your life and retain a fair measure of adaptive reserve.	You loathe your obsessions and consider yourself to be enmeshed in a maladaptive jumble with no reserve energy.

Source: Cammer, Leonard (1976), Freedom from Compulsions, New York: Simon and Schuster, p. 127.

workers; 7) compulsive talkers; 8) compulsive power and status seekers; and, 9) compulsive shoppers.

The studies conducted on the compulsive personality type report several distinct characteristics. These characteristics include: 1) anxiety (Coleman, Butcher and Carson 1984; Salzman 1968); 2) sensitivity to criticism (Turner, Steketee and Foa 1979); 3) decision-making difficulties such as avoidance of ambiguity, overstructuring of input, maladaptive overdefining of categories and boundaries, an abnormally highly subjective estimate of the probability of an unfavorable outcome and reluctance to take risks (Beech and Liddell 1974; Carr 1974; Millner, Beech and Walker 1971); 4) monolithic construct organization (Fransella 1974); 5) anal personality characteristics, such as orderliness, obstinancy, parsimony, emotional constriction, severe superego, rigidity, and perseverance (Pollack 1979); 6) grandiosity (Salzman 1968); 7) depression (Salzman 1968); 7) inability to tolerate discomfort or postpone gratification (Coleman, Butcher, and Carson 1984); 8) more susceptible to information overload (Emmelkamp 1982); 9) insecurity; 10) tendency toward feelings of guilt; 11) high vulnerability to threat; and 12) unusual preoccupation with control (Coleman, Butcher, and Carson 1984; Salzman 1968).

Pollack (1979) argues that the traits present in the compulsive and obsessive-compulsive personalities are among the most prevalent social character structures in Western culture, since they embody many of the traits associated with the Protestant Work Ethic and capitalism. Salzman (1968) goes as far as to say that the compulsive personality type is today's most prevalent neurotic character structure.

Credit Card Payment System

Credit is an integral part of the financial structure of the United States. Abend (1986) reported that statistics show that 19 1/2 percent of disposable income is committed to non-mortgage debt--an all-time high. A recent Gallup Poll summarized in Reader's Digest (1997) reports that 44 percent of families are concerned that they might owe more than they should. Consumer debt is an important issue associated with compulsive purchasing, since credit is a mechanism which compulsive purchasers can use to support their habitual behaviors.

Adcock, Hirschman, and Goldstucker (1977), Awh and Waters (1974), Goldstucker and Hirschman (1977), Matthews and Slocum (1970), Plummer (1971), Slocum and Matthews (1975), Hirschman and Goldstucker (1978), Paksoy (1979), Mandell (1972), and Garcia (1980) present descriptive studies examining the differences between users and nonusers of various forms of consumer credit. Hirschman (1979),

Feinberg (1986), and Russell (1975) examine the behavioral effects of credit card payment systems. These studies support the contention that individuals tend to spend more money when purchasing with a credit card.

Of particular interest in the current research is the problematic debt situation. Abend (1986) reports statistics from the U.S. Administrative Office of the Court for the year ending September 30, 1985 which show that there were 314,378 personal bankruptcies in that time period. This is compared to 283,656 for the previous 12 month period. Understanding the defaulter and the reasons for defaulting is an issue which is of importance to credit-granting institutions.

Neifeld (1961) discusses his perception of "psychopathic debtors" who account for "a disproportionate number of garnishment actions, conciliation court actions, wage earner bankruptcies, and collection effort and expense." (p. 258). He describes them in the following excerpt.

. . . the money difficulties of this particular group are self-imposed. They cannot be eliminated by social workers or by protective legislation. They are mere symptoms of deep seated personality disturbances. These people are 'money sick.'
. . . Money sickness merely happens to be the particular form in which these people seek escape reality. The psychosis originates in an emotional conflict which is hidden--an error in adaptation between the individual and society. (p. 258)

Caplovitz (1974) presented several social characteristics of default debtors. These characteristics included: 1) lower-income blue collar workers; 2) loss of employment; 3) relatively young; 4) low education; and, 5) members of ethnic groups. Dessart and Kuylen (1986) associated stage of the family life cycle (children present from the ages of 7 to 18, few years of work experience, lower income, sources of additional income, renting dwelling, low financial reserves, and financial obligations to mail-order companies with problematic debt situations.

Caplovitz (1974) also presented a classification scheme for reasons for default. The classification scheme was divided into two major categories--debtor's mishaps and shortcomings and those situations in which the creditor may be implicated. Debtor's shortcomings included loss of income, voluntary overextension, involuntary overextension, marital instability, and debtor irresponsibility.

Whatever the reasons for credit default, credit granters must take responsibility for the careful screening of credit applications. Reader's Digest (1987) reports that along with the rise in bankruptcies, the percentage of credit applications approved is between 40 and 60 percent. Five years ago it was 30 to 50 percent. Credit card issuers are launching aggressive marketing campaigns to attract new customers. As reported by Abend (1987), these campaigns

often include direct mail strategies which place unsolicited credit card applications in the homes of the consumer. Abend (1985) reported that two of the most attractive markets for credit cards are working women and the college population.

Credit card issuers develop credit policies to discriminate those individuals who are credit worthy from those who are not. Neifeld (1961) discusses the factors which must be considered when granting an individual credit--the individual's moral responsibility, assets, income, stability of employment and the probability of hazards that may change any of these. These factors can be summed up in the three C's of credit: character, capacity and capital. Other C's of credit have been added: conditions, collateral, caution, completions and common-sense.

Cole (1984) reports a credit grading system which is an analytical device to aid in the credit-granting decision. He states that "grading the credit is simply the examination of evidence and the recording of the quality judgment drawn from specific evidence bearing on specific factors in an orderly manner" (p. 231). Elements to be graded include income, employment, residence, age, references, reserve assets, payment record, and reputation. Each element is graded either 1 (good), 2 (fair), or 3 (poor). The total

grade must not surpass a specified total for credit to be granted.

Another credit-granting tool which Cole (1984) discusses is the credit scoring plan or point system (Cole 1984). This system is described below.

A typical credit scoring system assigns points to certain characteristics deemed an indication of credit worthiness. The points are added together to determine an applicant's score. If the score is above a designated level, the applicant will receive credit. If the score is below another level, credit is refused. If an applicant scores within a range which makes him or her a possible good risk, then the company will run a credit check to further determine credit worthiness. Scoring systems may incorporate information on as few as 5 or as many as 350 characteristics. (p. 238)

The characteristics which are used in the point or scoring system are developed by examining the characteristics of past credit customers. The characteristics which discriminate good credit customers from those who are not are included in the system. Verification of information on the credit application is obtained from credit bureaus.

Summary and Conclusions

Studies and theories which are relevant to the current research on compulsive purchasing have been reviewed in this chapter. Mood state was shown to affect both cognitive processes and behavior. Research focusing on the mood states of anxiety and depression were examined and the

relationship to defensive strategies, addiction, and the compulsive personality was discussed.

The theoretical base of the three models presented in Chapter I was discussed in this chapter. Theories of conditioning and evidence to support the presence of a conditioning process in the choice of defensive strategies were presented. Literature relating to the cycle of addiction and its relationship to the conditioning process and mood states were discussed. Research highlighting the characteristics and nature of the compulsive personality structure and its relationship to addiction, anxiety, depression, and the conditioning process was examined. Finally, research dealing with issues associated with the granting of credit was highlighted. Credit is particularly relevant in the current study because it serves as a mechanism to extend the purchasing power of the compulsive purchaser and, thus, support the habitual behavior.

The operationalization of the models, the research hypotheses, and the research methodology which were used to empirically test each of the models are discussed in Chapter III.

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CHAPTER III

METHODOLOGY

The operationalization and measurement of the personality constructs in the three models was accomplished through the use of the Millon Clinical Multiaxial Inventory (MCMI-II). In this chapter, the construction techniques of the MCMI, the validity and reliability studies, and the advantages of using the MCMI compared to other personality assessment tools is examined. In addition, the research design, research hypotheses, sample selection, and analysis techniques are discussed.

The Millon Clinical Multiaxial Inventory

The Millon Clinical Multiaxial Inventory is a relatively new personality assessment instrument. In spite of this characteristic, the results of validity and reliability studies have supported its usefulness as a tool to measure certain personality symptoms or traits. The following sections will discuss the MCMI, its construction techniques, its validity and reliability, its distinguishing features, and the recent changes in the MCMI which resulted in the MCMI-II, the instrument used in this study.

Description of the MCMI

The Millon Clinical Multiaxial Inventory (MCMI-II) is a 175-item, true-false, self-report personality assessment instrument. The inventory is composed of 22 trait scales which measure basic personality patterns, pathological personality disorders, and clinical syndromes. The scales and the number of items on the inventory which measure a particular construct are depicted in Table 3. The scales which will be used in this study are Scale 7 (Compulsive), Scale A (Anxiety), and Scale D (Dysthymia). Scale 7 (Compulsive/Conforming) measures a basic personality pattern, while Scales A (Anxiety) and D (Dysthymia) measure clinical syndromes. Scale 7 will be used to examine the presence of the compulsive personality disorder in compulsive purchasers. The description of the type of personality pattern measured by Scale 7 is provided by Millon (1987).

The passive-ambivalent orientation coincides with the DSM-III Compulsive personality disorder. These individuals have been intimidated and coerced into accepting the reinforcements imposed on them by others. Their prudent, controlled, and perfectionistic ways derive from a conflict between hostility toward others and a fear of social disapproval. They resolve this ambivalence not only by suppressing resentment, but by overconforming and by placing high demands on themselves and others. Their disciplined self-restraint serves to control intense, though hidden, oppositional feelings, resulting in an overt passivity and seeming public compliance. Behind this front of propriety and restraint, however, are intense

anger and oppositional feelings that occasionally break through their controls. (p. 29)

Table 3
Clinical Scales and Number of Keyed Items
on the MCMI-II

Category	Scale	Keyed Items
Basic Personality Pattern	1 Schizoid (Asocial)	35
	2 Avoidant	40
	3 Dependent (Submissive)	37
	4 Histrionic (Gregarious)	40
	5 Narcissistic	49
	6A Antisocial (Aggressive)	45
	6B Aggressive (Sadistic)	45
	7 Compulsive (Conforming)	38
	8 Passive-Aggressive (Negativistic)	41
	8A Self-Defeating	40
Pathological Personality Disorder	S Schizotypal (Schizoid)	44
	C Borderline (Cycloid)	62
	P Paranoid	44
Clinical Syndrome	A Anxiety	25
	H Somatoform	31
	N Bipolar:Manic	37
	D Dysthymia	36
	B Alcohol Dependence	46
	T Drug Dependence	58
	SS Thought Disorder	33
	CC Major Depression	31
PP Delusional Disorder	22	

Source: Millon, Theodore (1987), Millon Clinical Multiaxial Inventory Manual-II, Minneapolis: National Computer Systems, Inc., pp. 229-232.

Scales A and D will be used to examine the presence of anxiety and depression in compulsive purchasers as possible precipitating factors in the compulsive purchasing process. Millon (1987) describes the syndrome measured by Scale A.

This patient often reports feeling either vaguely apprehensive or specifically phobic, is typically tense, indecisive, and restless, and tends to complain of a variety of physical discomforts, such as tightness, excessive perspiration, ill-defined muscular aches, and nausea. . . .Most give evidence of a generalized state of tension, manifested by an inability to relax, fidgety movements, and a readiness to react and be easily startled. Somatic discomforts--for example, clammy hands or upset stomach--are also characteristic. Also notable are worrisomeness and an apprehensive sense that problems are imminent, a hyperalertness to one's environment, edginess, and generalized touchiness. (p. 31)

Millon (1987) also describes the clinical syndrome measured by Scale D.

The high-scoring patient remains involved in everyday life but has been preoccupied over a period of two or more years with feelings of discouragement or guilt, a lack of initiative and behavioral apathy, low self-esteem, and frequently voiced futility and self-deprecatory comments. During periods of dejection, there may be tearfulness, suicidal ideation, a pessimistic outlook toward the future, social withdrawal, poor appetite or overeating, chronic fatigue, poor concentration, a marked loss of interest in pleasurable activities, and a decreased effectiveness in fulfilling ordinary and routine life tasks. (p. 32)

In addition to the 22 clinical scales, the MCMI also includes four modifier and correction scales. A validity index, composed of four items, is present to account for non-comprehension of questions or random responding to the questions. The computer-generated profile report simply states whether or not the results of an individual report are valid based on this index. The Disclosure level (Scale X) measures the extent to which patients were inclined to be

frank and self-revealing in their answers. The Desirability gauge (Scale Y) measure the respondent's desire to create an image of social attractiveness and to conceal personality defects or behavioral traits that are not considered socially acceptable. Finally, the Debasement measure (Scale Z) measures the tendency to demean or denigrate oneself and to play up emotional vulnerabilities. Adjustments are made in Scales 7, A, and D if these correction scales are significantly different from expected scale scores.

The MCMI uses base rates for comparison purposes, instead of transforming raw scores into standard scores (population norms). Standard scores assume normal distributions. Millon (1983) states that

This assumption is not met when a set of scales is designed to represent either personality "types" or clinical "syndromes," since neither are normally distributed nor of equal prevalence in patient populations. Furthermore, it is not the prime purpose of a clinical instrument to locate the relative position of a patient on a frequency distribution, but rather to identify or calculate the probability that the patient is or is not a member of a particular diagnostic entity. . . it would be wise to construct and employ transformation scores that are more meaningful and useful than standard scores.
(p. 10)

The creation of the base rate scores are based on two external validity studies conducted by Millon (1983). The two studies included samples of 682 and 296 patients. The psychologists who counseled these patients were asked to

diagnose their patients in conjunction with descriptions of each MCMI personality trait measured. The clinicians were also asked to rate the severity of each of the symptoms or syndromes in their patients. Base rates were derived from these studies.

The base rate cutoff score of 75 (BR 75) represents the presence of personality or symptom features. The range for the presence of a personality or symptom feature is BR 75-BR 84. The base rate cutoff score of 85 (BR 85) represents the highest or most salient personality or symptom syndrome present in an individual's personality structure. The base rate score of 60 (BR 60) is the arbitrary median.

Construction of the MCMI

The construction of the MCMI was a well-planned step-by-step process to insure the validity and reliability of the instrument. The three phases included in the construction of the test are: 1) theoretical-substantive validation phase; 2) internal-structural validation phase; and 3) external-criterion validation phase. The procedures used to implement each of the phases are discussed in the following sections.

Theoretical-substantive validation phase. During this phase, an effort was made to ensure that the items comprising the instrument derive their content from an explicit theoretical framework. The guiding theory for the

MCMI is the theory of personality developed by Millon (1969, 1981). The initial pool of 3,500 items was based on the eight personality types posited by Millon in his theory. The next step was to reduce the item pool on rational grounds. The criteria for selecting items for further analysis included grammar, clarity, simplicity, content validity, and scale relevance. Further elimination was accomplished by presenting the items to patients and clinicians and asking them to judge the questions on the above criteria. Finally, selected items were placed on two equivalent provisional forms, each containing 566 items (Millon 1983).

Internal-structural validation phase. The first step in this phase was to administer the provisional forms to a diverse clinical sample. A quota sample was used to ensure adequate representation of age, sex, socioeconomic class and race in the sample selected. The median reliability resulting from this administration was .81 for all twenty scales. The next step was to calculate item-scale intercorrelations and item endorsement frequencies. Point-biserial correlations were calculated between each item and each of the provisional form clinical scales. The median biserial correlation for the provisional forms was .47. After eliminating those items with correlations less than .30, the median biserial correlation was .58. Finally,

a structurally-valid research form was established. The 440 remaining items were screened on the criteria of adequate representation of each scale's trait diversity or syndrome complexity and consistence of overlapping scales with theoretical framework. At this point, the instrument was considered structurally-valid (Millon 1983).

External-criterion validation. Over 200 clinicians in the United States and Great Britian were asked to administer the 289-item research form to patients. With this data, profile and cluster analyses which resulted in the original 175-item MCMI were conducted.

Validity of the MCMI

The three types of validity which are the most important consideration in the construction of any instrument used to measure a construct are content validity, criterion-related validity, and construct validity (Mehrens and Lehmann 1975). According to Nunnally (1978), content validity is present if a specified domain of content has been adequately sampled. He states "rather than test the validity of measures after they are constructed, one should ensure validity by the plan and procedures of construction." (p. 92) He also suggests "two major standards for ensuring content validity: (1) a representative collection of items and (2) "sensible" methods of test construction." (p. 92)

Applying these two standards, the MCMI demonstrates content validity.

Demonstrating criterion-related validity involves empirical evidence of a relationship between the test scores and some independent external measure. The two types of criterion-related validity are predictive and concurrent (Mehrens and Lehmann 1975). The criterion which is being measured against the MCMI is the Diagnostic and Statistical Manual, Third Edition (DSM-III). This manual is the standard reference for the diagnosis of psychological disorders. A revision of the DSM-III was introduced in 1987. However, in the current research, the third edition of the Diagnostic and Statistical Manual was used. Millon (1985, 1986) claims that the MCMI corresponds to the categories of disorders in the DSM-III. However, Widgier, Williams, Spitzer, and Frances (1985, 1986) disagree with Millon's claim. No empirical evidence exists for either stand. For the purposes of this study, the issue of criterion-related validity of the MCMI with the DSM-III disorder classification schema is not a concern, since this research does not rely on the ability of the MCMI-II to accurately predict disorders according to the DSM-III schema.

Construct validity, the degree to which the test scores can be accounted for by certain explanatory constructs in a

psychological theory, is the third type of validity to be considered in test construction (Mehrens and Lehmann 1975).

According to Nunnally (1978):

. . .there are three major aspects of construct validation: (1) specifying the domain of observables related to the construct; (2) from empirical research and statistical analyses, determining the extent to which the observables tend to measure the same thing, several different things, or many different things; and, (3) subsequently performing studies of individual differences and/or controlled experiments to determine the extent to which supposed measures of the construct produce results which are predictable from highly accepted theoretical hypotheses concerning the construct (p. 98)

The first two aspects of construct validity were taken into consideration in the construction of the MCMI. The third aspect is examined in many studies of the MCMI. Robert, et. al. (1985) demonstrates the construct validity of the MCMI in their study of Posttraumatic Stress Disorder. Craig, Verinis, and Wexler (1985) compared opiate addicts with alcoholics and revealed data which supports theoretical expectations. Flynn and McMahon (1984) studied three experimental groups and concluded that the factor structure of the MCMI is relatively stable. McMahon, Flynn, and Davidson (1985) and Piersma (1986a, 1986b) come to the same conclusion, but qualify that personality characteristics are more stable than symptoms. Auerbach (1984) and Prifitera and Ryan (1984) demonstrate construct validity in the narcissism scale.

Although the MCMI is a relatively new clinical assessment instrument, it is already considered the leading challenger to the lengthy Minnesota Multiphasic Personality Inventory (Widiger, Williams, Spitzer, and Frances 1985). Due to the careful test construction and favorable results of validity studies, the MCMI has become widely used. The test appears to meet the criteria of content and construct validity. Empirical studies demonstrating the criterion-related validity of the MCMI as a predictor of DSM-III disorders have yet to be conducted.

Reliability of the MCMI

Reliability is concerned with the extent to which the measurements made by an instrument are repeatable or stable over a variety of situations in which they should be the same (Nunnally 1978). Millon (1987) presents results of reliability studies conducted on the MCMI-II. The measure of internal consistency which was used was the Kuder Richardson Formula 20 (KR-20). This measure is the special version of the coefficient alpha for dichotomous variables and should be the first estimate of reliability to be obtained for a new measurement method (Nunnally 1978). The estimates of reliability using the KR-20 coefficients of a sample of 825 individuals are shown in Table 4. The median KR coefficients for all clinical scales is .90 with a range of .81 to .95 (Millon 1987). The KR-20

coefficients show a high degree of internal consistency for all twenty scales. This data supports the contention that the MCMI-II is a relatively consistent measurement instrument.

Distinguishing Features of the MCMI

The MCMI has features which make it preferable to other personality inventories for certain situations and populations. The MCMI is shorter than comparable instruments and is linked to a comprehensive clinical theory--Millon's theory of personality and psychopathology (1969). Millon (1983) claims that the instrument has conceptual and diagnostic parallels with the DSM-III, although there is disagreement on this point. The MCMI differentiates between enduring characteristics and symptoms and in level of severity of each. The instrument is not based on a normal population and uses base rates rather than standardized scores. The test was constructed using validation techniques. Cross-validation and reliability studies have shown favorable results. The test also has computer-generated test results and reports. These reports include a computer-plotted profile report and an automated MCMI interpretive report. The interpretive report consists of a theoretically and empirically based narrative assessment of the patient's personality traits and symptom features (Millon 1987).

Table 4
Estimates of Reliability for the MCMI-II Scales

Scale	KR-20 (n=825)
1 Schizoid	.86
2 Avoidant	.93
3 Dependent	.88
4 Histrionic	.90
5 Narcissistic	.87
6 Antisocial	.88
6A Aggressive (Sadistic)	.86
7 Compulsive	.91
8A Passive-Aggressive	.93
8B Self-Defeating	.90
S Schizotypal	.93
C Borderline	.92
P Paranoid	.90
A Anxiety	.94
H Somatoform	.92
N Bipolar:Manic	.84
D Dysthymia	.95
B Alcohol Dependent	.84
T Drug Dependent	.87
SS Thought Disorder	.86
CC Major Depression	.90
PP Delusional Disorder	.81

Source: Millon, Theodore (1987), Millon Clinical Multiaxial Inventory Manual-II, Minneapolis: National Computer Systems, Inc., p. 129.

Revision of the MCMI

The MCMI was revised in 1987 because of five major reasons. The first was that important developments had taken place in the underlying theory of the instrument. Specifically, two personality disorders, sadistic and self-defeating personalities, were added to the inventory.

Second, the theory's characterization of several personality disorders and clinical syndromes had been further refined. Therefore, there was a need to change the items comprising those scales. Third, the American Psychiatric Association introduced a revision of the DSM-III. The MCMI needed to respond to these revisions. The fourth and fifth reasons were the desire to enhance scale validities and to reduce spurious scale overlapping (Millon 1987).

There were four major changes made to the original MCMI. The first change was the addition of two new personality disorder scales and three modifier scales to detect random responding, faking, denial, and complaining. The second change was the addition of 45 new items and the deletion of 45 items which were not adding discriminating power to the instrument. The third change was the introduction of an item weighting system which reflect item differences in the variety and strength of their supporting validation data. Finally, the interpretive texts were modified to reflect the developments in the theory and the instrument (Millon 1987). The revised MCMI still reflects the features and advantages which make this instrument a desirable one to use. Because these changes appear to make the MCMI a more powerful assessment instrument, the MCMI-II was used in this study.

The Research Design

The area of compulsive purchasing has not yet been empirically examined by researchers in the psychology or marketing disciplines. Therefore, this study was an exploratory empirical examination of the area using two separate quasi-experimental designs.

The dependent variables in the study were: 1) level of anxiety; 2) level of depression; 3) degree of compulsivity; 4) degree of anxiety after purchasing; 5) degree of depression after purchasing; 6) degree of guilt after purchasing; 7) degree of anxiety after guilt; 8) degree of depression after guilt; 9) propensity to purchase after anxiety; and, 10) propensity to purchase after depression. The first three dependent variables were measured in the blocked three-group quasi-experimental design depicted in Figure 6.

Figure 6

Research Design for the First Experiment

		MCMII-II Scale Scores
Type	Experimental Group 1 (Compulsive Purchasers)	0 ₁
of	Experimental Group 2 (Alcoholics)	0 ₂
Problem	Experimental Group 3 (Overeaters)	0 ₃

The dependent variables were measured using the appropriate scales on the MCMI-II. The level of anxiety, depression, and compulsivity present in each of the three groups were examined for significant differences.

This design is quasi-experimental since participants in the study were not chosen in a random manner. A convenience sample was utilized to select participants. In this study, the experimental treatment was the presence of a behavior disorder--either alcoholism, compulsive purchasing behavior, or overeating. It is impossible to impose this behavior as an experimental treatment. Therefore, membership in a particular group was considered a blocking factor in this experimental design. Potential members of the three groups were screened using the Landess scale introduced in Chapter I. Likewise, the supervising psychologist of each of the three groups was asked to make a qualitative judgment based on experience with the individuals as to whether potential participants had problems with either of the other two behavioral disorders. This judgment was made with a reasonable degree of certainty on the part of the psychologist and minimized the overlap in disorders between the three groups.

The remaining seven dependent variables were examined using a blocked 3 X 3 quasi-experimental design. The

pictorial representation of this design is shown in Figure 7.

For each of the dependent variables, group means were compared for significant differences. The measurement was responses on self-report questions concerning each of the dependent variables. The blocking factor was the same as in the above design.

The second independent variable in this design was the product scenario. This variable was introduced in to

Figure 7

Research Design for the Second Experiment

	Type of Product Scenario		
	Durable	Non-durable	Service
Experimental Group 1 (Compulsive Purchasers)	O ₁	O ₂	O ₃
Experimental Group 2 (Alcoholics)	O ₄	O ₅	O ₆
Experimental Group 3 (Overeaters)	O ₇	O ₈	O ₉

determine if the type of product might have an effect on compulsive purchasing behaviors across the three groups. A different scenario was presented to each of three randomly selected sub-groups within each experimental group. The product classification used was durable, nondurable, or

service (Kotler 1984). The scenario presented the participants with a hypothetical situation in which they had compulsively purchased a product within one of the categories. They were then asked to rate the degree to which their anxiety and/or depression decreased, the extent to which they experienced guilt after the purchasing episode, and the degree to which they felt compelled to purchase after feeling guilt. This particular design allowed for the testing of differences in compulsive purchasing behavior across different product classifications as well as across the three groups. The questionnaire and the three product scenarios are presented in Appendix A.

The Sample Design

The 45 members of the first experimental group (EG 1) came from two sources. Twenty of the participants in this group were members of a self-help group for compulsive purchasers. To ensure that these participants have the characteristics which have been identified in compulsive purchasers, the Landess scale was administered to each individual agreeing to participate in the study. This scale was reproduced in Chapter I. Individuals with at least seven positive responses to items on this scale were included in the first experimental group. The supervising counselor was asked to exclude from the study any individuals who were judged to have problems with either

alcohol or overeating. This judgment was a qualitative one based on the counselor's experience with the individuals participating in the study.

The remaining 25 members of this group were obtained from a mail survey. Potential participants were asked to complete the Landess scale. Those respondents with seven or more positive responses to the scale were then contacted to see if they would participate further in the study. A further step in the screening process was determining that potential participants did not have a problem with either alcohol or overeating. This was accomplished by a self-report question and by examining the MCMI for evidences of alcohol dependence. None of these 25 participants showed evidence of either alcohol or drug dependence.

The second experimental group (EG 2) was composed of 45 alcoholics who were participants in a counseling program at the time of the study. The Landess scale was also administered to this group to ensure there were no alcoholics in the group who were also compulsive purchasers. Once again, the counselor made a qualitative judgment to exclude from the study individuals who were thought to also have a problem with overeating. The participants in EG 2 were currently in either a counseling program at a treatment center or are members of a Alcoholics Anonymous Chapter in Shreveport, Louisiana.

The third experimental group (EG 3) was composed of 45 individuals who were participants in Overeaters Anonymous, a support group for compulsive overeaters. The potential members of this group were also screened using the Landess scale to ensure that no compulsive purchasers were used as controls. The supervising counselor was asked to exclude from the study individuals who were judged to have a problem with alcohol. In addition, the individual's scores on the alcohol dependence scale on the MCMI were checked. None of the participants in the overeater group had a significant score on the alcohol dependence scale.

The sample size of each of the three groups was 45, with 15 allocated to each experimental cell in the 3 X 3 blocked design. Participation in the study was entirely voluntary, with each participant being asked to sign an informed consent form. A copy of this form is located in Appendix B.

Hypotheses

The general hypotheses used to test the three models introduced in Chapter I are listed below. The models presented compulsive purchasing as a learned behavior, an addiction, and a personality disorder. The first hypothesis is related to the first experiment, while the remaining hypotheses relate to the second experiment. All hypotheses are stated in the null and have alpha levels of .05.

First Experiment

Hypothesis 1: There is no significant difference in the mean scores of the three groups on Scale 7 (Compulsive), Scale A (Anxiety), or Scale D (Dysthymia) on the MCMI-II.

Second Experiment

Hypothesis 2: There is no significant difference in the reported level of depression after the purchasing of a durable, nondurable, or service in EG 1, EG 2, and EG 3.

Hypothesis 3: There is no significant difference in the reported level of anxiety after the purchasing of a durable, nondurable or service in EG 1, EG 2, and EG 3.

Hypothesis 4: There is no significant difference in the reported degree of guilt after compulsive purchasing behavior of a durable, nondurable, or service in EG 1, EG 2, and EG 3.

Hypothesis 5: There is no significant difference in the reported degree of depression after the guilt following the compulsive purchasing of a durable, nondurable, or service in EG 1, EG 2, and EG 3.

Hypothesis 6: There is no significant difference in the reported degree of anxiety after the guilt following the compulsive purchasing of a durable, nondurable, or service in EG 1, EG 2, and EG 3.

Hypothesis 7: There is no significant difference in the reported propensity to engage in the compulsive

purchasing of a durable, nondurable, or service after feeling depression in EG 1, EG 2, and EG 3.

Hypothesis 8: There is no significant difference in the reported propensity to engage in the compulsive purchasing of a durable, nondurable, or service after feeling anxiety in EG 1, EG 2, and EG 3.

Testing of Hypotheses

All analyses in the study were conducted with the use of the SPSS-X computer program. Hypothesis 1 was tested using multivariate analysis of variance (MANOVA). The appropriate contrast tests were conducted to reveal which group means exhibit significant differences.

Hypotheses 2 through 8 were tested simultaneously using multivariate analysis of variance (MANOVA). This technique tests the effects of both factors--type of product scenario and type of problem. It also tests the significance of the interaction of the type of product scenario and the type of problem. A simultaneous testing of the two independent variables with all seven dependent variables also preserves the alpha level, while separate ANOVAs do not (Hair, Anderson, and Tatham 1987). The appropriate contrast tests were also conducted to determine which group means are significantly different. The results of these analyses are discussed in detail in Chapter IV.

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CHAPTER IV

ANALYSIS OF DATA

A total of 135 individuals participated in the experimentation resulting in 15 respondents in each of the nine experimental cells. Fifty of the respondents were male and eighty-five of the respondents were female. The mean age was 34.2 years with an age range from 16 to 73. The income distribution of the sample is summarized in Table 5.

Table 5
Income Distribution for the Sample

	Number	Percentage
Less than \$15,000	33	24.4
\$15,000 - \$24,999	26	19.3
\$25,000 - \$34,999	15	11.1
\$35,000 - \$44,999	17	12.6
\$45,000 - \$54,999	19	14.1
\$55,000 and above	25	18.5

Multivariate Analysis of Variance (MANOVA) was used to test the eight hypotheses in the study. The SPSS-X statistical package was used to execute the MANOVA procedure. The assumptions of MANOVA are presented followed

by a discussion of the MANOVA analyses conducted in this study.

Assumptions of MANOVA

There are three primary assumptions regarding the structure of data in MANOVA. Johnson and Wichern (1982) report the assumptions as: 1) the random samples are from different populations and are different; 2) all populations have a common covariance matrix; and, 3) each population is multivariate normal.

These assumptions must be satisfied before MANOVA can be interpreted. The first assumption was satisfied by the a priori screening and identification of individuals who were placed into groups that were independent of one another.

The second assumption must be tested with the use of a multivariate test for homogeneity of dispersion of the matrices. The appropriate statistic is Box's M since it tests the null hypothesis of no difference between the variance and covariance matrices. This test simultaneously considers variances and covariances (Norusis 1985) and will be conducted for each of the MANOVA analyses to ensure that this assumption was upheld. This assumption can be violated provided that the number of cases in each sample is the same (Hays 1963).

The final assumption of MANOVA is that the population distribution of each of the dependent variables must be

multivariate normal. This assumption was tested by examining scatterplots of the data. However, the F test is relatively unaffected by violations of this assumption (Hays 1963).

The Pillai's Trace statistic was used to examine the differences in the means in this analysis. This statistic was chosen over other possible tests because it is robust to departures from the assumptions of MANOVA (Mardia 1971; Norusis 1985) and it is considered the most powerful test for detecting differences when they do exist (John 1971; Norusis 1985).

In addition, Bartlett's test of Sphericity will be conducted for each MANOVA to test the hypothesis that the population correlation matrix is an identity matrix or comes from a population of variables that are independent. This is necessary since MANOVA is not useful if the dependent variables are not correlated (Norusis 1985).

Hypothesis 1

The first null hypothesis in the study was that there is no significant difference in the mean scores of compulsive purchasers, alcoholics, and overeaters on the MCMI-II Scale 7 (Compulsive), Scale A (Anxiety), and Scale D (Dysthymia). The group means on the three scales are shown in Table 6.

Table 6
Group Means on the MCMI-II Scales

Group	Scale 7 (Compulsive)	Scale D (Dysthymia)	Scale A (Anxiety)
Compulsive Purchasers	55.96	35.82	42.73
Alcoholics	59.67	35.51	35.33
Overeaters	62.67	33.11	36.96
Overall Mean	59.43	34.81	38.34

The Box's Λ statistic was 16.71 with an approximate F value of 1.35 and an approximate p value of .18. Therefore, the assumption of homogeneity of dispersion is upheld in this analysis. Bartlett's Test of Sphericity resulted in a value of 153.96 with a p value of .00. Therefore, the variables are not independent and MANOVA is appropriate. The Pillai's Trace value was .06 with an approximate F value of 1.4 and a p value of .21. Therefore, the null hypothesis of no difference between the three groups on the three MCMI scales was upheld leading to the conclusion that compulsive purchasers, alcoholics, and overeaters do not differ in their scores on the anxiety, depression, and compulsivity scales on the MCMI-II. Univariate F tests on each of the three scales were not conducted since no difference was

shown in the multivariate test. The scores of all groups on all three scales are lower than the cutoff score signifying the presence of a personality pattern or a clinical syndrome (BR 75). Therefore, it may be useful to examine the correction and modifier scales of the MCMI-II for this sample. The validity scale was checked and 100 percent of the reports were considered to be valid. The distribution of Scales X (Disclosure level), Y (Desirability gauge), and Z (Debasement measure) are depicted in Tables 20, 21, and 22 in Appendix C.

According to Table 20, 119 of the 135 participants (88 percent) were categorized as either nondisclosing, slightly nondisclosing, or only slightly self-disclosing. Referring to Table 21, 81 respondents (60 percent) were categorized as engaging in some degree of self-ingratiating responding on the MCMI-II. Likewise, Table 22 reveals 83.7 percent of the sample (113 respondents) were categorized as non self-deprecating. The combination of the results of the three modifier/correction scales may explain the low BR scores of the three groups on the three scales. Not only were the majority of respondents unwilling to disclose information about themselves, they also chose to respond in a manner in which they would appear to have very socially desirable characteristics. Therefore, participants in all three groups gave less than honest answers in completing the MCMI,

which would definitely account for the low responses on the scales being examined.

Hypotheses 2, 3, 4, 5, 6, 7, and 8

The final seven hypotheses were considered together in one MANOVA test and are presented in Table 7. These hypotheses involved two factors--problem of the individual respondent (compulsive purchasers, alcoholics, and overeaters) and product scenario (durable, nondurable, and service). The MANOVA simultaneously examined the effect of each of these factors on each of the seven items of the Likert scale administered to the participants. The group means for each of the nine experimental groups on each of the seven dependent variables are shown in Table 8.

The Box's M test was conducted to test for the assumption of homogeneity of dispersion. The resulting value was 287.53 with an approximate F value of 1.35 and a p value of .002. Therefore, the assumption of homogeneity of dispersion of the variance-covariances matrices is not upheld. An examination of the univariate homogeneity of variance tests, Cochran's C , reveals the values shown in Table 9. Since the univariate tests do not reveal any violations of the assumption of homogeneity of variance and Pillai's Trace statistic is robust to violations of this assumption (Johnson and Wichern 1982; Norusis 1985; Srivastava and Carter 1983; Wildt and Ahtola 1978), the

Table 7

Hypotheses 2 Through 8

-
- Hypothesis 2: There is no significant difference in the reported level of depression after the purchasing of a durable, nondurable, or service in EG 1, EG 2, and EG 3.
- Hypothesis 3: There is no significant difference in the reported level of anxiety after the purchasing of a durable, nondurable, or service in EG 1, EG 2, and EG 3.
- Hypothesis 4: There is no significant difference in the reported degree of guilt after compulsive purchasing behavior of a durable, nondurable, or service in EG 1, EG 2, and EG 3.
- Hypothesis 5: There is no significant difference in the reported degree of depression after the guilt following the compulsive purchasing of a durable, nondurable, or service in EG 1, EG 2, and EG 3.
- Hypothesis 6: There is no significant difference in the reported degree of anxiety after the guilt following the compulsive purchasing of a durable, nondurable, or service in EG 1, EG 2, and EG 3.
- Hypothesis 7: There is no significant difference in the reported propensity to engage in the compulsive purchasing of a durable, nondurable, or service after feeling depression in EG 1, EG 2, and EG 3.
- Hypothesis 8: There is no significant difference in the reported propensity to engage in the compulsive purchasing of a durable, nondurable, or service after feeling anxiety in EG 1, EG 2, and EG 3.
-

Table 8

Group Means for the Seven Dependent Variables

	Dependent Variables*						
	Y1	Y2	Y3	Y4	Y5	Y6	Y7
Compulsive Purchasers							
Durable Product	3.33	2.70	4.20	3.47	3.33	2.40	2.30
Nondurable Product	3.67	3.47	4.00	5.53	3.27	2.53	2.87
Service	2.87	3.20	3.73	3.07	3.13	2.93	2.87
Alcoholics							
Durable Product	3.40	2.80	3.27	3.00	2.93	1.93	2.13
Nondurable Product	3.33	2.93	3.40	3.00	3.13	2.40	2.20
Service	2.33	2.33	3.73	3.80	3.40	2.13	2.00
Overeaters							
Durable Product	3.33	2.93	1.93	1.93	1.93	1.80	1.80
Nondurable Product	1.73	1.40	1.67	1.87	1.73	1.47	1.20
Service	3.20	2.73	2.20	2.07	1.73	1.93	1.80
Overall Mean	3.02	2.73	3.13	2.86	2.73	2.17	2.13

*Y1--Depression would be reduced by purchasing

*Y2--Anxiety would be reduced by purchasing

*Y3--Would eventually feel guilty about purchasing

*Y4--Guilt would cause depression again

*Y5--Guilt would cause anxiety again

*Y6--Depression would result in more purchasing

*Y7--Anxiety would result in more purchasing

MANOVA analysis was continued. Bartlett's Test of Sphericity, a test designed to test the hypothesis that the correlation matrix came from a population of variables that are independent (Hair, Anderson, and Tatham 1987), resulted in a value of 434.75 and a p value of .00. This indicates

Table 9
Univariate Homogeneity of Variance Tests

Dependent Variable	Cochran's C	p Value
Y1	.158	1.00
Y2	.141	1.00
Y3	.144	1.00
Y4	.163	1.00
Y5	.144	1.00
Y6	.158	1.00
Y7	.182	.83

that the variables are not independent and that MANOVA analysis is appropriate.

The first effect to be tested for significance was the interaction effect of the problem factor and the product scenario factor. If an interaction effect exists, the factor effects do not have a clear interpretation. The presence of interaction implies that the factor effects are

not additive, an assumption of MANOVA, and complicates the interpretation of results (Johnson and Wichern 1982).

Pillai's Trace value for the interaction effect was .34 with an approximate F value of 1.63 and a p value of .02. Therefore, the interaction effect is significant. The univariate F tests for each dependent variable for the significance of the interaction effect is shown in Table 10. These F values are the same as the F values from one-way analyses of variance and examine differences for each of the dependent variables.

The interaction effect is significant for two dependent variables--Y1 and Y2. Y1 is the reported decrease in depression after purchasing and Y2 is the reported decrease in anxiety after purchasing.

When the interaction effect is significant, several steps must be taken before the factor effects can be examined. The first suggested step is to examine interaction diagrams--graphs of the mean scores on Y1 of the three levels of factor one (compulsive purchasers, alcoholics, and overeaters) by the three levels of factor two (durable, nondurable, and service). If interaction does not exist, the resulting curves will be parallel (Seber 1984). The interaction diagrams for Y1 and Y2, the variables for which interaction appears to be present, are depicted in Figures 8 and 9. An examination of these graphs

Table 10
Univariate F Tests for the Interaction Effect

Dependent Variable	<u>F</u> Value	p value
Y1	4.98	.001
Y2	4.87	.001
Y3	.84	.504
Y4	1.24	.296
Y5	.39	.816
Y6	.74	.564
Y7	1.51	.204

reveals that the curves are not parallel. Therefore, the interaction does appear to be significant and of concern in the interpretation of the results.

A second step to be taken to determine the significance of the interaction effects is to transform the data. In some cases, departure from an additive model may be corrected by the transformation of the data. In this case, a multiplicative model may be transformed to an additive model through the use of log transformations (Wildt and Ahtola 1978). If the interaction effect is a function of the nature of the scale used in the study, then the transformation may result in a correction of the

Figure 8
Interaction Diagram for Y1

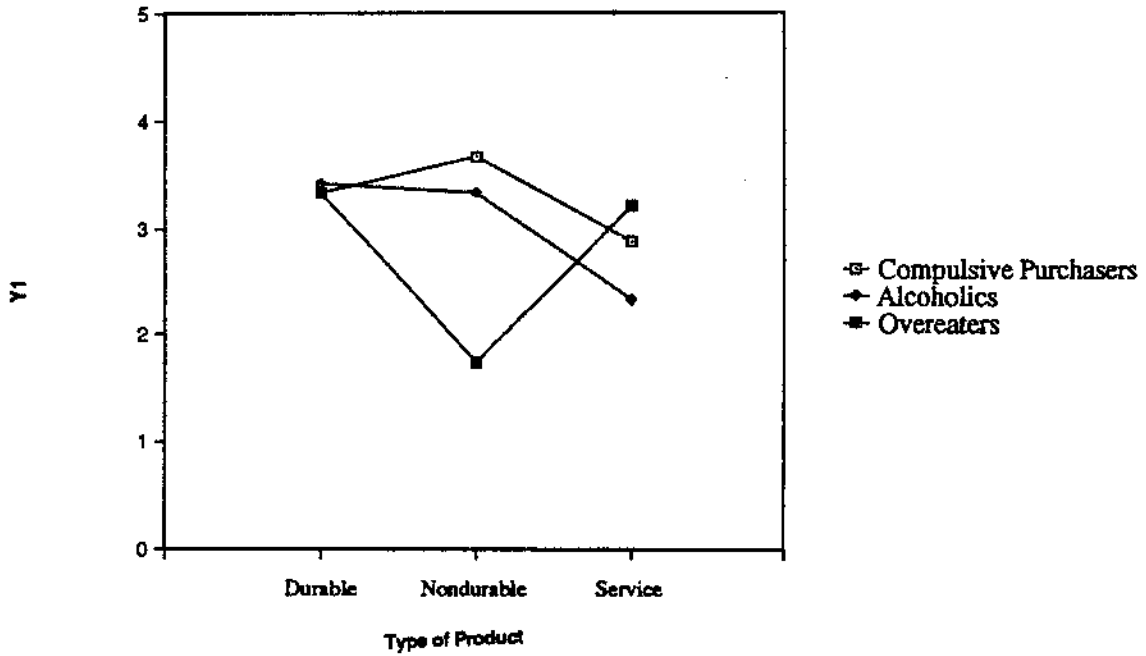
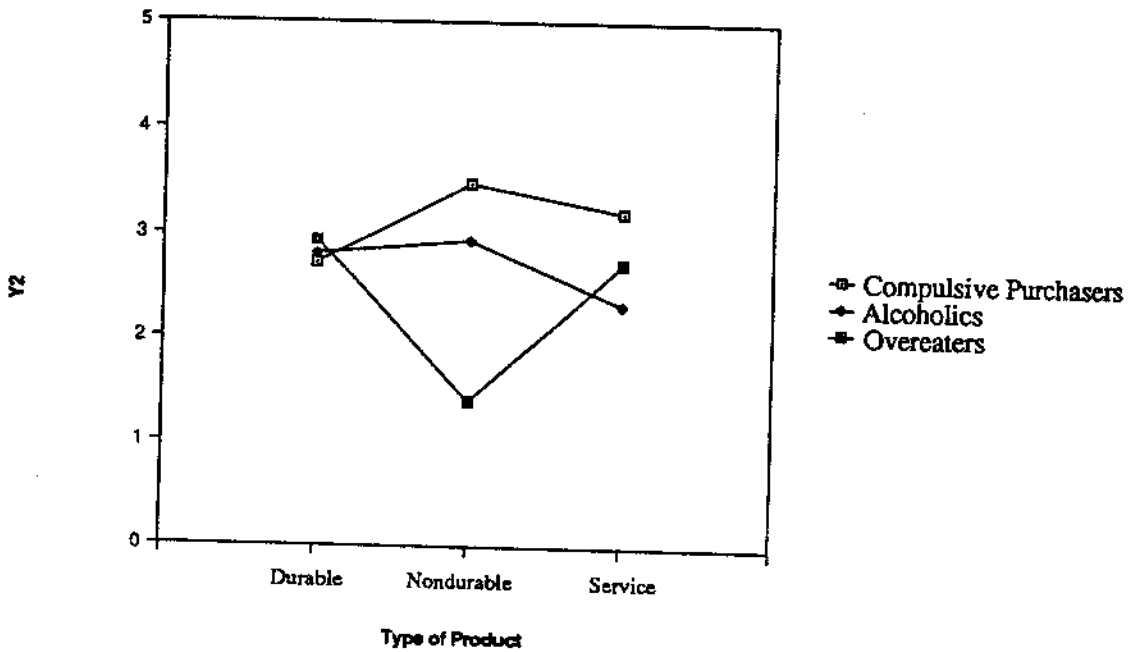


Figure 9
Interaction Diagram for Y2



interaction. A MANOVA was conducted using a natural log transformation. The Pillai's Trace statistic for the interaction effect was .35 with an approximate F value of 1.67 and a p value of .02. Again, Y1 and Y2 showed interaction at the significance level of .000 and .001, respectively.

The interaction effect of the two factors in this experiment appears to present a significant problem in the interpretation of the main effects. Hays (1963) describes the effect of a significant interaction as a situation in which "overall estimates of differences due to one factor are fine as predictors of average differences over all possible levels of the other factor, but it will not necessarily be true that these are good estimates of the differences to be expected when information about the category on the other factor is given." (p. 391) Hays suggests that a significant interaction effect signifies that differences do exist between treatments, but determining how they differ requires further analysis. Specifically, he suggests examining the differences by looking within the levels of the other factor.

Moroney (1951) refers to this process as breakdown analysis and suggests that this technique be used when the above steps determine that a significant interaction does exist. Breakdown analysis involves doing separate analyses

on the original data by breaking down the data into levels of one of the factors. In this case, a breakdown analysis by product scenario was conducted. Therefore, three separate MANOVAs were conducted for each of the three levels of product scenarios.

In the first breakdown analysis, only those respondents who were exposed to the durable product scenario were included ($n=45$). The test for homogeneity of dispersion, Box's M , resulted in a value of 56.45 and an approximate F value of 1.46 and p value of .06. Bartlett's Test of Sphericity resulted in a value of 163.62 and a p value of .00. Therefore, the null hypotheses of a correlation matrix from a population of independent variables is rejected and the data is appropriate for MANOVA. The Pillai's Trace statistic for this the problem effect in this analysis was .54 with an approximate F value of 1.96 and a p value of .03. The univariate F tests for each of the seven dependent variables are shown in Table 11. This analysis reveals that only Y3, Y4 and Y5 exhibit significant differences when the product scenario includes the purchasing of a durable product.

The second breakdown analysis involved testing the problem effect by examining only those respondents who were exposed to the nondurable product scenario ($n=45$). The Box's M value was 50.89 with an approximate F value of 1.32

Table 11
Univariate F Tests for Durable Product Scenario

Dependent Variable	<u>F</u> Value	p Value
Y1	.82	.446
Y2	.11	.901
Y3	15.07	.000
Y4	6.63	.003
Y5	6.16	.005
Y6	1.53	.229
Y7	1.05	.358

and a p value of .12. Bartlett's Test of Sphericity resulted in a value of 189.95 with a p value of .00. Therefore, the data is appropriate for MANOVA. Pillai's Trace statistic was .77 with an approximate F value of 3.28 and a p value of .00. The univariate F tests, summarized in Table 12, indicate that significant differences exist in all seven dependent variables when the nondurable product scenario is considered.

The final breakdown analysis involved testing the problem effect considering only those respondents exposed to the service scenario (n=45). The Box's M value for this analysis was 107.44 with an approximate F value of 1.45 and

Table 12
Univariate F Tests for Nondurable Product Scenario

Dependent Variable	<u>F</u> Value	p Value
Y1	14.14	.000
Y2	16.38	.000
Y3	17.47	.000
Y4	6.21	.004
Y5	6.35	.004
Y6	4.94	.012
Y7	12.14	.000

a p value of .016. This signifies that a difference does appear to exist in the variance-covariance matrices in this analysis. However, MANOVA is robust to violations of this assumption (Johnson and Wichern 1982; Srivastava and Carter 1983; Wildt and Ahtola 1978). Bartlett's Test of Sphericity resulted in a value of 132.61 with a p value of .00. The Pillai's Trace statistic was .63 with an approximate F value of 2.44 and a p value of .007. The univariate F tests, shown in Table 13, reveal significant differences in Y3, Y4, Y5, and Y7.

In order to answer the research questions, further analysis must be done. On those variables that showed

Table 13
Univariate F Tests for Service Scenario

Dependent Variable	F Value	p Value
Y1	3.04	.058
Y2	1.78	.181
Y3	7.45	.002
Y4	7.66	.001
Y5	8.11	.001
Y6	2.40	.103
Y7	4.04	.025

significant differences during the MANOVA analysis, contrast tests must be conducted to see between which groups the differences exist. Of specific interest is whether differences exist between compulsive purchasers and alcoholics and between compulsive purchasers and overeaters on each of the dependent variables. This analysis directly tests each of the final seven hypotheses.

The appropriate test is the Scheffe contrast test. The Scheffe test permits all possible comparisons while ensuring that the probability of any type I error across all comparisons will be held to a specified alpha level (.05). In most cases, Scheffe results in very conservative tests

(Cohen and Cohen 1983; Hair, Anderson, and Tatham 1987). Because of the conservative feature of the Scheffe contrast test, it was chosen over alternative contrast tests for use in this analysis. The Scheffe contrast tests were executed through the use of the ONEWAY procedure in the SPSS-X statistical package. The results of the Scheffe tests are discussed for each dependent variable in the following sections.

Hypothesis 2

This hypothesis examined the difference in the reported level of depression after the purchasing of a durable, nondurable, or service in EG 1, EG 2, and EG 3. The breakdown analysis revealed a significant difference only when the nondurable product scenario was considered. The results of the Scheffe contrast test for Y1 revealed a significant difference between compulsive purchasers and overeaters on the reported degree of depression reduction after the purchase of a nondurable ($p = .00$). No significant difference was shown to exist between compulsive purchasers and alcoholics on this dependent variable ($p = .4$).

Hypothesis 3

Hypothesis 3 examined the difference between the three groups on the reported level of anxiety reduction after

purchasing either a durable, nondurable, or a service. Once again, the breakdown analysis revealed a significant difference only for the nondurable product scenario. The Scheffe contrast test for Y2 revealed a significant difference between compulsive purchasers and overeaters on the reported degree of anxiety reduction after purchasing in the nondurable product category ($p = .00$). No significant difference was shown to exist between compulsive purchasers and alcoholics on this dependent variable ($p = .16$).

Hypothesis 4

Hypothesis 4 examined the differences in the three groups in the reported degree of guilt following the compulsive purchasing of either a durable, nondurable, or a service. The MANOVA revealed a significant difference in all three product categories. The significance levels of the Scheffe contrasts tests for Y3 is shown in Table 14. The contrast tests results show a difference between compulsive purchasers and alcoholics on the reported degree of guilt only when durable products are being purchased. Compulsive purchasers and overeaters show significant differences across all three product categories on the degree of guilt felt.

Table 14
Significance Levels for
Scheffe Contrast Tests for Y3

Product Scenario	Group Comparison	
	Purchasers vs. Alcoholics	Purchasers vs. Overeaters
Durable	.030	.000
Nondurable	.151	.000
Service	1.000	.002

Hypothesis 5

Hypothesis 5 examines the differences in the three groups with respect to the reported degree of depression felt after the guilt when compulsively purchasing either a durable, nondurable, or a service. Differences were found to be significant in all three breakdown analyses on Y4. Therefore, Scheffe contrasts tests were conducted for all three product scenarios. The results are shown in Table 15. The significance levels for the contrast tests show that differences exist between compulsive purchasers and overeaters on the reported degree of depression after the guilt when purchasing durables, nondurables, and services. No differences were exhibited between compulsive purchasers and alcoholics on this dependent variable.

Table 15
Significance Levels for
Scheffe Contrast Tests for Y4

Product Scenario	Group Comparison	
	Purchasers vs. Alcoholics	Purchasers vs. Overeaters
Durable	.286	.001
Nondurable	.276	.001
Service	.107	.030

Hypothesis 6

This hypothesis examined the difference between the three groups in the reported degree of anxiety following the guilt experienced after the compulsive purchasing of a durable, nondurable, or a service. The breakdown analysis showed a significant difference between at least two of the groups in all three product categories. Therefore, Scheffe contrast tests were conducted for all product categories. The results, shown in Table 16, demonstrate a difference between compulsive purchasers and overeaters no matter which product category is considered. Once again, no significant differences were shown to exist between compulsive purchasers and alcoholics on Y5.

Table 16
Significance Levels for
Scheffe Contrast Tests for Y5

Product Scenario	Group Comparison	
	Purchasers vs. Alcoholics	Purchasers vs. Overeaters
Durable	.336	.001
Nondurable	.781	.003
Service	.552	.003

Hypothesis 7

Hypothesis 7 examined the difference between the three groups on the reported propensity to again engage in the compulsive purchasing of a durable, nondurable, or a service after feeling depression. The breakdown analysis revealed that a significant difference existed between at least two of the groups only when the nondurable product scenario was presented. Therefore, Scheffe contrasts tests were conducted only for this product category. The results revealed that a significant difference exists between purchasers and overeaters on this dependent variable ($p = .006$). No difference was exhibited between compulsive purchasers and alcoholics on this variable ($p = .72$).

Hypothesis 8

The final hypothesis in the study examined the differences between the three groups on the reported propensity to again engage in compulsive purchasing after feeling anxiety. The breakdown analysis revealed significant differences when the nondurable and the service scenarios were considered. The results of the Scheffe contrast tests are shown in Table 17. These results

Table 17
Significance Levels for
Scheffe Contrast Tests for Y7

Product Scenario	Group Comparison	
	Purchasers vs. Alcoholics	Purchasers vs. Overeaters
Nondurable	.057	.000
Service	.036	.011

demonstrate significant differences between compulsive purchasers and overeaters when both nondurables and services are considered. However, a significant difference exists between compulsive purchasers and alcoholics only when the service scenario is considered.

Findings

The general findings of the study revealed that individuals who compulsively purchase are similar to individuals who engage in other types of compulsive behaviors in terms of personality characteristics. This is consistent with the expected findings of the study. However, compulsive purchasers differ from individuals who engage in other types of compulsive behavior in terms of behaviors related to shopping. These behaviors depend on the product category which is being examined.

The first hypothesis to be examined in the study was whether compulsive purchasers differed from alcoholics and overeaters on the MCMI-II Scale 7 (Compulsive), Scale A (Anxiety), and Scale D (Dysthymia). The data analysis revealed that the scores of these three groups were not significantly different. Therefore, compulsive purchasers do exhibit personality characteristics similar to those exhibited by individuals with other compulsive disorders. No post hoc analyses were conducted to determine what differences, if any, exist between the personality characteristics of compulsive purchasers, alcoholics, and overeaters.

In order to examine the differences between compulsive purchasers and overeaters on the specific behaviors and emotions examined in this study, the means of the compulsive

purchasers and the overeaters for those variables on which differences were shown to exist between these two groups are summarized in Table 18. Similarly, to examine the differences between compulsive purchasers and alcoholics on the specific behaviors and emotions examined in this study, the means of the compulsive purchasers and the alcoholics for those variables on which differences were shown to exist between these two groups are summarized in Table 19. These means correspond to the seven hypotheses testing dependent variables Y1 through Y7.

As can be seen from the two tables, when a difference is shown to exist between compulsive purchasers and one of the two other groups, the group mean for compulsive purchasers is always greater than that for the other group. This demonstrates a greater degree of agreement for the compulsive purchasing group since the 5-point scale used in the study designated strongly agree to be equal to 5 and strongly disagree to be equal to 1. This finding supports the models presented in Chapter I in which it was proposed that compulsive purchasers would react more strongly with respect to each of the seven dependent variables in the study.

Another important finding in the study is that most of the differences exhibited in this study existed only between compulsive purchasers and overeaters. Compulsive purchasers

Table 18

Compulsive Purchaser and Overeater
Group Means for Significant Variables

Dependent Variable	Product Category	Compulsive Purchasers	Overeaters
Y1	Nondurable	3.67	1.73
Y2	Nondurable	3.47	1.40
Y3	Durable	4.20	1.93
	Nondurable	4.00	1.67
	Service	3.73	2.20
Y4	Durable	3.47	1.93
	Nondurable	3.53	1.87
	Service	3.07	2.07
Y5	Durable	3.33	1.93
	Nondurable	3.27	1.73
	Service	3.13	1.73
Y6	Nondurable	2.53	1.47
Y7	Nondurable	2.87	1.20
	Service	2.87	1.80

Table 19

Compulsive Purchaser and Alcoholic
Group Means for Significant Variables

Dependent Variable	Product Category	Compulsive Purchasers	Alcoholics
Y3	Durable	4.20	3.27
Y7	Service	2.87	2.00

and alcoholics differed in only two situations. These differences are summarized in the following sections.

Hypothesis 2

A significant difference in the reported level of depression after the compulsive purchasing of a nondurable was demonstrated between compulsive purchasers (mean = 3.67) and overeaters (mean = 1.73).

Hypothesis 3

A significant difference in the reported level of anxiety after the compulsive purchasing of a nondurable was demonstrated between compulsive purchasers (mean = 3.47) and overeaters (mean = 1.4).

Hypothesis 4

A significant difference was demonstrated in the reported degree of guilt felt after compulsive purchasing of either of the three product categories between compulsive purchasers and overeaters. For durable products, the mean for compulsive purchasers was 4.2, while the mean for overeaters was 1.93. When presented with the nondurable product scenario, the compulsive purchaser group had a mean of 4, while the overeater group had a mean of 1.67. For the service scenario, the compulsive purchaser mean was 3.73 and the overeater mean was 2.2. A significant difference was also demonstrated between compulsive purchasers (mean = 4.2)

and alcoholics (mean = 3.27) in the reported degree of guilt following the compulsive purchasing of a durable product.

Hypothesis 5

A significant difference was shown in the reported degree of depression after the guilt following the compulsive purchasing of all product categories between compulsive purchasers and overeaters. In the durable product scenario, compulsive purchasers had a mean of 3.47 and overeaters had a mean of 1.93. The nondurable product scenario resulted in a mean of 3.53 for compulsive purchasers and a mean of 1.87 for the overeater group. The service scenario means were 3.07 for the compulsive purchaser group and 2.07 for the overeater group.

Hypothesis 6

The reported degree of anxiety after the guilt following the compulsive purchasing of either a durable, nondurable, or a service differed significantly between compulsive purchasers and overeaters. For the durable product scenario, the compulsive purchaser mean was 3.33, while the overeater mean was 1.93. The nondurable product scenario means were 3.27 for the compulsive purchaser group and 1.73 for the overeater group. The service scenario resulted in means of 3.13 for the compulsive purchaser group and 1.73 for the overeater group.

Hypothesis 7

A significant difference was demonstrated in the reported propensity to engage in the compulsive purchasing of a durable after feeling depression between the compulsive purchasers (mean = 2.53) and overeaters (mean = 1.47).

Hypothesis 8

A significant difference in the reported propensity to engage in the compulsive purchasing of either a nondurable or a service was demonstrated between compulsive purchasers and overeaters. For the nondurable product scenario, the compulsive purchaser mean was 2.87 and the overeater mean was 1.2. The service scenario resulted in means of 2.87 for the compulsive purchaser group and 1.8 for the overeater group. A significant difference was also demonstrated between compulsive purchasers (mean = 2.87) and alcoholics (mean = 2) on this dependent variable.

Discussion

The purpose of this exploratory examination of compulsive purchasing behavior was to provide insight into the nature of this type of consumer behavior. It was determined that an appropriate technique for conducting this type of examination was to compare personality characteristics and reported behavioral tendencies of compulsive purchasers with those of other similar types of

compulsive behaviors--alcoholism and overeating. The results of these comparisons resulted in some mixed findings as to the nature of compulsive purchasing. These findings are discussed in the following sections.

Personality Characteristics

The comparison of personality characteristics between the three groups demonstrated results consistent with the models presented in Chapter I. It was hypothesized that compulsive purchasers would have levels of compulsivity, anxiety, and depression similar to alcoholics and overeaters. However, the levels demonstrated in all three groups were lower than expected. According to Millon (1987), the base rate cutoff score of 75 represents the presence of personality or symptom features, while the base rate cutoff score of 85 represents the highest or most salient personality or symptom syndrome present in an individual's personality structure. The groups means on the compulsivity scale were 55.96 for compulsive purchasers, 59.67 for alcoholics, and 62.67 for overeaters. For the depression scale, the group means were 35.82 for compulsive purchasers, 35.51 for alcoholics, and 33.11 for overeaters. For the anxiety scale, the group means were 42.73 for compulsive purchasers, 35.33 for alcoholics, and 36.96 for overeaters. Therefore, none of the three groups exhibited the level of anxiety, depression, or compulsivity which is

the level of anxiety, depression, or compulsivity which is typical of a problematic personality type or trait.

The level exhibited between the three groups on all three scales was, however, not significantly different. This can lead to the conclusion that, although not dominant personality characteristics, anxiety, depression, and compulsivity are present in compulsive purchasers at levels seen in people exhibiting other types of "abnormal" behavior--alcoholism and overeating. Since the levels are lower than expected, other personality characteristics not examined in this study may be more useful in explaining why the three groups engage in these types of behaviors.

There are several possible explanations for the low scores. Scale 7 is primarily designed to measure the presence of compulsivity as a personality pattern, or the compulsive personality disorder. While individuals in these three groups may be expected to have compulsive tendencies, they are not likely to exhibit the presence of the compulsive personality disorder. Scale A is designed to measure the anxiety disorder. The type of anxiety measured by this scale is more similar to trait anxiety than state anxiety. Menasco and Hawkins (1978) differentiate trait anxiety as a stable characteristic of an individual's personality while state anxiety is transient and occurs as a response to a particular stimulus. The low scores by all

three groups on Scale A may indicate that state, rather than trait, anxiety may be operative in these behavioral disorders. Likewise, Scale D is indicative of low-level chronic depression of at least two years' duration. Coleman, Butcher, and Carson (1984) describe another type of mild depression, situational depression. This type of depression is expected to occur in anyone undergoing certain traumatic but common life events. Therefore, this type of depression, rather than dysthymia, may be a more important factor in these types of behavior.

Another possible explanation is that a majority of the participants in this study were classified as some degree of non-disclosing, self-ingratiating and/or non self-deprecating. Therefore, their responses on the MCMI-II were made in a manner which would make them appear in the best light. Their responses were less than honest which would account for the low scores on the three scales being examined.

Behavioral Tendencies

The second portion of the study examined the hypothesized compulsive purchasing process. The seven dependent variables examined were the seven steps seen in similar addictive behaviors. It was hypothesized that compulsive purchasers would have higher means, regardless of the type of product scenario, than both alcoholics and

overeaters on all seven dependent variables. Although all three groups exhibit similar types of behaviors in an addiction cycle, the focus of alcoholics would be drinking and the focus of overeaters would be eating. Therefore, compulsive purchasers should have higher means when purchasing behavior in an addiction cycle is considered.

The results of this study, however, were very mixed. The first two dependent variables in the analysis--the reported level of anxiety and depression after the compulsive purchasing behavior--showed a significant interaction between the three groups and the three product scenarios. The result of subsequent analysis demonstrated that significant differences existed on the seven variables between overeaters and compulsive purchasers only when the nondurable product scenario was considered. Therefore, the product scenario becomes a moderator variable in the relationship between group membership (compulsive purchaser or overeater) and the reported levels of anxiety or depression after the compulsive purchasing behavior. In other words, the relationship between group membership and these two dependent variables is conditional on the type of product scenario. In this study it was demonstrated that the levels of anxiety and depression are different between the groups only when the nondurable product scenario is presented.

The results of the study showed a significant difference between compulsive purchasers and overeaters, regardless of the product scenario presented, in the third, fourth, and fifth dependent variables. These variables were the reported degree of guilt following the compulsive purchasing behavior, the subsequent level of anxiety, and the subsequent level of depression felt by the respondent. Compulsive purchasers and alcoholics were different in the reported degree of guilt felt after compulsive purchasing only when a durable product scenario was presented. The differences shown between compulsive purchasers and overeaters are consistent with the expected findings of the study. However, the fact that alcoholics are different in the level of guilt felt only when durable products are considered is contrary to the expected findings. If a difference were to occur between alcoholics and compulsive purchasers in the level of guilt felt after purchasing, it seems logical to assume that this difference would occur for the nondurable or the service product categories. The fact that alcoholics feel less guilt only when purchasing a durable is contrary to the theory behind this study.

The sixth and seventh dependent variables in the analysis were the reported propensity to engage in compulsive purchasing after feeling anxiety and the reported propensity to engage in compulsive purchasing after feeling

depression. The means for all three groups were lower than those for the other dependent variables. This may signify that these two variables are not significant factors in the compulsive purchasing process. However, differences were shown to exist between overeaters and compulsive purchasers for the propensity to engage in compulsive purchasing after feeling depression (nondurable product scenarios only) and after feeling anxiety (nondurable and service scenarios). A difference was shown between alcoholics and compulsive purchasers in the propensity to engage in compulsive purchasing after feeling anxiety for the service scenario. Overall, these findings suggest that the anxiety and/or depression may trigger further purchasing in nondurable or service categories, but individuals will not necessarily purchase more durables because of the negative feelings. This may be due to the fact that durables are usually more expensive than the other two product categories. Compulsive purchasers continue to purchase in the less expensive product categories to alleviate the anxiety and/or depression, but all three groups behave similarly with respect to the durable product category.

The analysis of the overall compulsive purchasing model examined with the use of these seven dependent variables suggests several general conclusions. The first is that the level of anxiety and/or depression after compulsive

purchasing is different between compulsive purchasers and overeaters, but is dependent on the product category (nondurable). The second conclusion is that the guilt and the subsequent levels of anxiety and/or depression is higher in compulsive purchasers than in overeaters regardless of product category being considered. The third conclusion is that the propensity to engage in compulsive purchasing again after feeling anxiety and/or depression is higher for compulsive purchasers than for overeaters (for the nondurable and service scenarios) or alcoholics (for the service scenario). However, the propensity to engage in purchasing after feeling anxiety and/or depression is relatively low for all three groups in the study.

The analysis presents conflicting results since many differences were shown between compulsive purchasers and overeaters, but few differences were shown between compulsive purchasers and alcoholics. The similarities in personality characteristics between the three groups along with the conclusions drawn from the discussion of the compulsive purchasing cycle shed light on this problematic consumer behavior. However, the conflicting results prevent conclusions concerning the validity of the models presented in Chapter I. Many questions still exist as to the nature of this behavior. These questions, along with directions for future research, are discussed in Chapter V.

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CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

In the three proposed models presented in Chapter I, compulsive purchasing behavior was theorized to be a learned behavior to alleviate negative feelings (anxiety and/or depression), an addiction similar to alcoholism or overeating, and/or an effect of the presence of the compulsive personality structure. These models are presented in Figure 10 (Learning Model), Figure 11 (Addiction Model), and Figure 12 (Compulsivity Model).

To test the validity of these models, an experiment was designed and conducted with three groups--compulsive purchasers, alcoholics, and overeaters--being exposed to three hypothetical purchasing scenarios--durable products, nondurable products, or services being compulsively purchased. The measurement used was a Likert Scale on seven dependent variables representing behaviors related to the proposed models. In addition, the three groups were compared on their mean scores on three MCMI-II scales--Scale 7 (Compulsive), Scale A (Anxiety), and Scale D (Dysthymia).

Figure 10

The Learning Model of Compulsive Purchasing

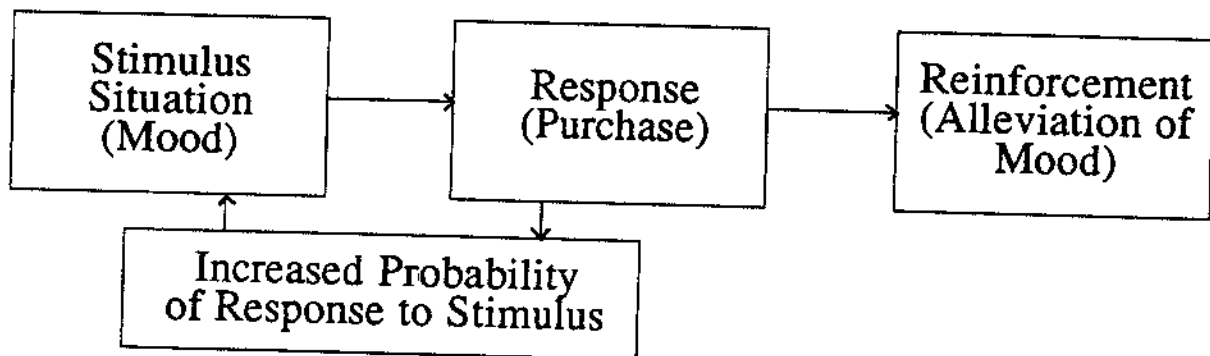


Figure 11

The Addiction Model of Compulsive Purchasing

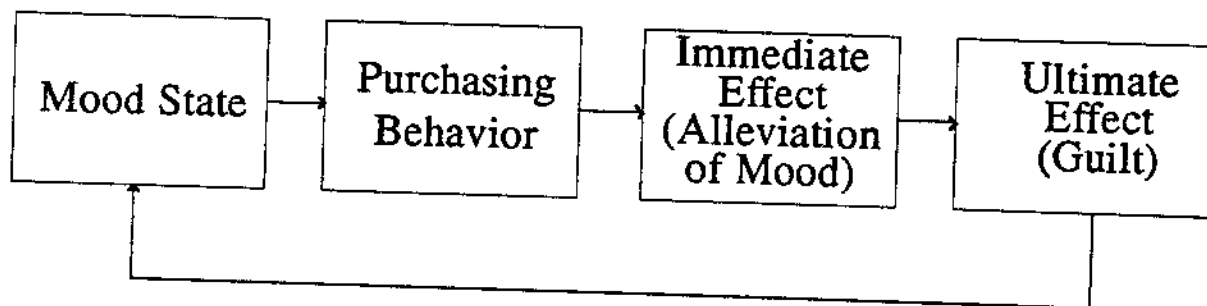
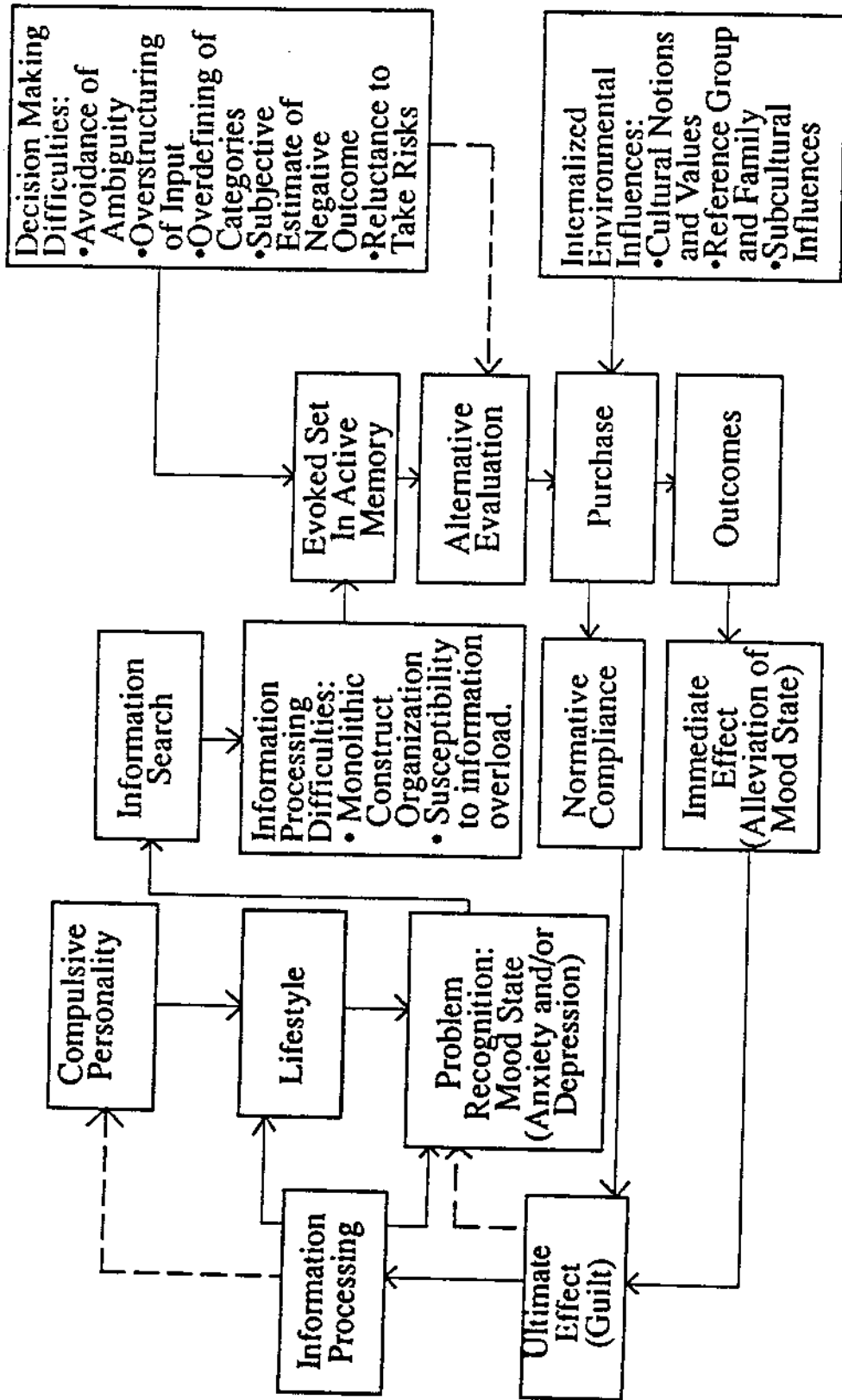


Figure 12
The Compulsivity Model of Compulsive Purchasing



Each of the nine experimental groups contained 15 respondents. The data were analyzed using MANOVA and the appropriate Scheffe contrast tests.

In the analysis of the three groups on their MCMI-II scores, no difference was demonstrated between the three groups' scores on any of the scales. The scores demonstrated on the scales were lower than those which would be expected if the personality trait were problematic. Therefore, the scores of compulsive purchasers on the anxiety, depression, and compulsivity scales were not high enough to be of concern, but were statistically the same as those levels seen in alcoholics and overeaters. Possible explanations for the low scores include the possible presence of compulsive tendencies rather than the compulsive personality disorder measured by Scale 7, the possible presence of state anxiety rather than the anxiety disorder measured by Scale A, and the presence of situational depression rather than the low-level chronic depression measured by Scale D. Another explanation is that a majority of the respondents scored low on the disclosure and debasement scales and high on the desirability scales. Therefore, several respondents were less than honest in their answers and wished to appear to have socially acceptable traits. This would account for the low scores on the three MCMI-II scales. No contrast tests were done since

there were no significant differences shown in the MANOVA analysis.

The second analysis examined the seven dependent variables measured through the use of the Likert scale. The effect of two independent variables, group membership and product scenario, were simultaneously tested across all seven dependent variables. Interaction between group membership and product scenario was significant and was shown to be serious for the first two dependent variables--the reported reduction of the level of depression and/or anxiety after the compulsive purchasing episode. Because of the significant interaction effect, a breakdown analysis was conducted in which separate MANOVAs were conducted for each of the three product scenarios. This was possible since the effect of the product scenario was not significant in the initial MANOVA.

The overall findings of the breakdown analysis and the subsequent Scheffe contrast tests for those variables showing a significant difference in the MANOVA were mixed. For the first two dependent variables, product scenario was shown to be a moderating variable. Significant differences were shown to exist between compulsive purchasers and overeaters only when the nondurable product category was considered. For the next three dependent variables, reported degree of guilt and reported levels of either

depression and/or anxiety after the guilt, significant differences were shown between compulsive purchasers and overeaters regardless of the product scenario being considered. Compulsive purchasers and alcoholics differed on the reported level of guilt when the durable product scenario was presented. The last two dependent variables, the reported propensity to engage in compulsive purchasing after feeling either depression and/or anxiety, resulted in mixed findings. The propensity to purchase after depression resulted in a difference between compulsive purchasers and overeaters for the nondurable product scenario. The propensity to purchase after anxiety resulted in differences between purchasers and overeaters for the nondurable product and service scenarios and between purchasers and alcoholics for the service scenario.

Conclusions

The study was an exploratory examination of compulsive purchasing behavior to learn more about the nature of the problem. The findings of the study do not conclusively prove the validity of the three models presented since the findings were mixed. The reasons for the inconclusive findings could be a function of several factors, including sample selection and sample size. Because of the nature of the groups used in this study, it was very difficult to find willing participants. Therefore, it was necessary to use

convenience sampling with a small sample size. However, the results of this exploratory study do provide insight into the nature of compulsive purchasing behavior and directions for future research.

The levels of anxiety, depression, and compulsivity present in the personality structure of compulsive purchasers was demonstrated to be statistically the same as those levels seen in alcoholics and overeaters. These three personality variables have been demonstrated to be associated with alcoholism and eating disorders. Therefore, these personality variables may also have an effect on compulsive purchasing behavior. However, the levels of each of these traits in all three groups were relatively low. Thus, other factors in the personality structure may be used to explain why compulsive purchasers behave in the manner in which they do. Overall, the presence of the compulsive personality as a contributing factor in this behavior was not supported by the findings of this research study. Therefore, the compulsivity model presented in Figure 12 was not supported by the results of this study.

Elements of the learning model (Figure 10) and the addiction model (Figure 11) were supported by this study. Since the levels of anxiety and depression demonstrated by compulsive purchasers were low, it is questionable that the motivating force behind this behavior is the presence of

these negative feelings. However, it may be possible that compulsive purchasers engage in excessive purchasing to relieve relatively low levels of anxiety and/or depression.

The alleviation of these negative feelings by the purchasing act (immediate effect) was reported to be higher by compulsive purchasers than by overeaters only when the nondurable product scenario was considered. The findings of this study do not suggest that compulsive purchasing significantly alleviates anxiety and/or depression in compulsive purchasers to a greater degree than it does for alcoholics or overeaters. The alleviation of negative feelings was an important assumption in both the addiction and the learning models, since this alleviation would serve as the reinforcement that continues the behavior.

The guilt eventually felt and the subsequent onset of feelings of either depression and/or anxiety (the ultimate effect) were the next constructs in the theorized addiction model which were tested. Overall, these aspects of the model were supported. Compulsive purchasers reported higher levels of guilt, depression, and anxiety than those reported by overeaters. However, the fact that significant differences were not shown between compulsive purchasers and alcoholics on these constructs puts these findings into question.

Finally, the reported propensity to again engage in compulsive purchasing after feeling depression and/or anxiety completes the theorized addiction cycle. The mixed findings on these constructs revealed a greater propensity for compulsive purchasers and the other two groups when specific product scenarios are considered. Therefore, it appears that the type of product which is being purchased (nondurable, durable, or service) is a moderating influence on whether a compulsive purchaser is more likely to again engage in compulsive purchasing. In other words, compulsive purchasers differ from alcoholics and overeaters in purchasing behavior depending upon the product category being considered.

The model which proposed compulsive purchasing as a result of the compulsive personality disorder (Figure 12) was not supported by this study. The addiction model (Figure 11) and the learning model (Figure 10) were partially supported, but appear to be dependent upon the type of product category which is being considered.

Implications

Compulsive purchasing is a behavior that appears to be an increasing problem for many consumers. Little is understood about how to prevent and/or correct this behavior. This study gives marketers a clearer understanding of what this behavior is and what it is not.

Since this behavior exhibits tendencies similar to those seen in other types of addictive cycles, it is important that this problem be viewed as an addiction. Individuals who engage in compulsive purchasing should be treated in a manner similar to individuals who have other types of behavioral addictions. In addition, control of credit is very important with respect to compulsive purchasers since "easy" credit can fuel this addiction. Current credit solicitation practices by some organizations should be seriously questioned. This practice can, in the long-run, prove inefficient if compulsive purchasers are recipients of these solicitations. These "heavy users" of credit may be among the primary abusers of credit in the current system.

Specific conclusions concerning the nature of compulsive purchasing are difficult to draw from the results of this study. However, this area seems to be one which is worthy of continued examination.

Recommendations

This study was a beginning point for the examination of compulsive purchasing behavior. As such, it is appropriate that it serve as a directive for further research into this problem. The specific research directions suggested by this study include the following areas.

1. It is recommended that the motivating force behind the compulsive purchasing process be further examined, including an examination into other types of personality variables that may influence this process. This will provide insight into the prevention and treatment of this problem.
2. It is recommended that compulsive purchasers be compared with other groups, such as "ordinary" consumers, to uncover other personality and behavioral differences.
3. It is recommended that the role of credit in this type of behavior be examined. In this study, it was assumed that credit played a significant role so this aspect was not directly examined.
4. It is recommended that the role of product be further examined. Specific types of products, as opposed to broad product categories, should be examined for their effect on this behavior.
5. It is recommended that the role of income level be examined for its effect on the types of products that are compulsively purchased.

APPENDIX A

QUESTIONNAIRE

1

Please answer all of the following questions. Your answers to these questions as well as those on the other test will be kept completely confidential. Thank you very much for your help.

- | Yes | No | |
|-------|-------|---|
| _____ | _____ | Is shopping your major form of activity? |
| _____ | _____ | Do you buy new clothes that sit in the closet for weeks or even months before you wear them? |
| _____ | _____ | Do you spend more than 20 percent of your take-home pay to cover your loans and credit cards? |
| _____ | _____ | Do you ever pay one line of credit with another? |
| _____ | _____ | Do you pay only the minimum balance on your charge accounts each month? |
| _____ | _____ | Do you ever hide your purchases in the car or lie about them so your spouse or friends don't know you were shopping? |
| _____ | _____ | Do you ever lie about how much something cost so your spouse or friends think you were just after a great bargain? |
| _____ | _____ | Do you buy something just because it is on sale even though you have no use for it? |
| _____ | _____ | When out with friends for dinner, do you offer to put the check on your credit card so you can collect the cash? |
| _____ | _____ | Do you feel nervous and guilty after a shopping spree? |
| _____ | _____ | Is your paycheck often gone on Tuesday when the next payday isn't until Friday? |
| _____ | _____ | Do you borrow money from friends, even though you know you'll have a hard time paying it back? |
| _____ | _____ | Do you frequently have to charge small purchases, such as toiletry items and groceries, because you don't have enough cash in your pockets? |
| _____ | _____ | Do you think others would be horrified if they knew how much money you spend? |
| _____ | _____ | Do you often feel hopeless and depressed after spending money? |

The next questions refer to the following situation: Assume that you have been feeling depressed lately. The symptoms you have include: either a poor appetite or bouts of overeating, either trouble sleeping or oversleeping, low energy, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness. You are also anxious and worried about several things in your life. You decide to go shopping. While shopping, you purchase several products, such as hobby-related products or clothing. Your purchases amount to quite a bit of money. You use your credit card to pay for the purchases.

For each of the following statements, check the space that most closely indicates the level of your agreement with that statement. (CHECK ONE FOR EACH STATEMENT)

	AGREE STRONGLY	AGREE SOMEWHAT	NEITHER AGREE OR DISAGREE	DISAGREE SOMEWHAT	DISAGREE STRONGLY
My depression would be reduced by purchasing in this situation.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
My anxiety would be reduced by purchasing in this situation.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
I would eventually feel guilty about my purchases.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel guilty, the guilt would cause me to feel depressed again.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel guilty, the guilt would cause me to feel anxious again.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel depressed again, I would probably go shopping.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel anxious again, I would probably go shopping.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>

The next questions refer to the following situation: Assume that you have been feeling depressed lately. The symptoms you have include: either a poor appetite or bouts of overeating, either trouble sleeping or oversleeping, low energy, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness. You are also anxious and worried about several things in your life. You decide to treat yourself to an activity such as going out to eat at an expensive restaurant, taking a trip, calling a friend long distance, or joining a health club. You spend quite a bit of money and use your credit card to pay for the services.

For each of the following statements, check the space that most closely indicates the level of your agreement with that statement. (CHECK ONE FOR EACH STATEMENT)

	AGREE STRONGLY	AGREE SOMEWHAT	NEITHER AGREE OR DISAGREE	DISAGREE SOMEWHAT	DISAGREE STRONGLY
My depression would be reduced by purchasing in this situation.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
My anxiety would be reduced by purchasing in this situation.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
I would eventually feel guilty about my purchases.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel guilty, the guilt would cause me to feel depressed again.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel guilty, the guilt would cause me to feel anxious again.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel depressed again, I would probably spend money to treat myself.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel anxious again, I would probably spend money to treat myself.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>

The next questions refer to the following situation: Assume that you have been feeling depressed lately. The symptoms you have include: either a poor appetite or bouts of overeating, either trouble sleeping or oversleeping, low energy, low self-esteem, poor concentration or difficulty making decisions, and feelings of hopelessness. You are also anxious and worried about several things in your life. You decide to go shopping. While shopping, you purchase several products, such as gourmet foods, magazines and books, cosmetics, or cologne. Your purchases amount to quite a bit of money. You use your credit card to pay for the purchases.

For each of the following statements, check the space that most closely indicates the level of your agreement with that statement. (CHECK ONE FOR EACH STATEMENT)

	AGREE STRONGLY	AGREE SOMEWHAT	NEITHER AGREE OR DISAGREE	DISAGREE SOMEWHAT	DISAGREE STRONGLY
My depression would be reduced by purchasing in this situation.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
My anxiety would be reduced by purchasing in this situation.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
I would eventually feel guilty about my purchases.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel guilty, the guilt would cause me to feel depressed again.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel guilty, the guilt would cause me to feel anxious again.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel depressed again, I would probably go shopping.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>
If I did feel anxious again, I would probably go shopping.	<u>5</u>	<u>4</u>	<u>3</u>	<u>2</u>	<u>1</u>

The following questions will be used for descriptive purposes only. Please check the space which applies to you and/or your household.

What is your sex? (CHECK ONE)

Male
 Female

In what year were you born? (YEAR) _____

What was the approximate total income of your household before taxes in 1987?
(CHECK ONE SPACE)

less than \$15,000
 \$15,000 - \$24,999
 \$25,000 - \$34,999
 \$35,000 - \$44,999
 \$45,000 - \$54,999
 \$55,000 and over

APPENDIX B

INFORMED CONSENT FORM

USE OF HUMAN SUBJECTS

INFORMED CONSENT

NAME OF SUBJECT: _____

- I. I hereby give consent to Alicia Briney to perform or supervise the administration of the Millon Multiaxial Clinical Inventory.
- II. I understand that my responses to the MCMI will be used in group form only and in no way can be traced back to me. I have been given the opportunity to release my responses to my counselor. I have heard a clear explanation and understand the nature of the test. I have also heard a description of possible risks and benefits associated with the test. I understand that I have the right to ask any questions concerning the test and that I am free to withdraw my consent and to discontinue participation in the study at any time without risk of prejudice. With my understanding of this, having received this information and satisfactory answers to the questions I have asked, I voluntarily consent to the procedure designated in Paragraph 1 above.

DATE: _____

SIGNED: _____
(Witness)SIGNED: _____
(Subject)
orSIGNED: _____
(Witness)_____
(Person Responsible)_____
Relationship

INSTRUCTIONS TO PERSONS AUTHORIZED TO SIGN: If the subject is not competent, the persons responsible shall be the legal appointed guardian or legally authorized representative. If the subject is a minor under 18 years of age, the person responsible is the mother or father or legally appointed guardian. If the subject is unable to write his name, the following is legally acceptable: John H. (His X Mark) Doe and two (2) witnesses.

APPENDIX C

FREQUENCY DISTRIBUTIONS OF THE MCMI-II
SCALES X, Y, AND Z

Table 20
Frequency Distribution for Scale X (Disclosure)

	Number	Percentage
Moderately to Very Nondisclosing (<BR 36)	28	20.7
Slightly Nondisclosing (BR 36 - 59)	54	40.0
Slightly Self-disclosing (BR 60 - 74)	37	27.4
Moderately Self-disclosing (BR 75 - 84)	7	5.2
Very Self-disclosing (>BR 84)	9	6.7

Table 21
Frequency Distribution for Scale Y (Desirability)

	Number	Percentage
Moderately to Very Non Self-ingratiating (<BR 36)	13	9.6
Slightly Non Self- ingratiating (BR 36 - 59)	41	30.4
Slightly Self-ingratiating (BR 60 - 74)	43	31.9
Moderately Self-ingratiating (BR 75 - 84)	17	12.6
Very Self-ingratiating (>BR 84)	21	15.5

Table 22
Frequency Distribution for Scale Z (Debasement)

	Number	Percentage
Moderately to Very Non Self-deprecating (<BR 36)	53	39.3
Slightly Non Self- deprecating (BR 36 - 59)	60	44.4
Slightly Self-deprecating (BR 60 - 74)	12	8.9
Moderately Self-deprecating (BR 75 - 84)	3	2.2
Very Self-deprecating (>BR 84)	7	5.2

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