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Individual differences in planning for the future

London, Anne McKee, Ph.D.
Case Western Reserve University, 1991
INDIVIDUAL DIFFERENCES IN PLANNING FOR THE FUTURE

by

Anne McKee London

Submitted in partial fulfillment of the requirements for the Degree of Doctor of Philosophy

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January, 1991
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(Chairman)

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Anne M. London
Individual Differences in Planning for the Future

Abstract

by

Anne McKee London

The studies reported herein were conducted to identify individual differences in how people plan for the future. The first study focused on identifying personality characteristics and behavioral tendencies which affect the process of planning. It was expected that the individual difference variables would be related to efficacy and the need for achievement, and that scores on the variables would form patterns indicative of planning styles.

Once planning styles were identified, the studies focused on construct and predictive validation in an effort to determine whether the styles were related to personality characteristics or behavior. In Studies One and Two, planning styles were compared with motive, skill levels, learning styles, personality types, value orientations, and interpersonal styles. In Study Three, longitudinal research was conducted to determine
whether planning style was predictive of behavior in graduate school or at work.

The results of the studies were encouraging, suggesting that there are personality and behavioral characteristics that affect how people plan. However, the planning styles were not discrete, and were not as richly or as clearly depicted as had been expected. Because of these anomalies and some unexpected results, an exploratory study was conducted.

Analysis of the total data set indicated that differences in planning for the future might better be studied in terms of dimensions of the planning process, rather than in terms of personality styles. Factor analysis indicated that there are three dimensions which seem to capture different approaches to planning. The first dimension, Efficacy, seems to indicate the degree to which a person feels in control of the future. The second dimension, Achievement Orientation, seems to be indicative of planning behaviors associated with the need for achievement. The third dimension, Vision, is related to how far into the future a person sees, and whether the future is considered in instrumental or developmental terms.
The studies indicate that there are individual differences in how people plan for the future. The results also suggest that these differences might be best explained in terms of the relative influence of the planning dimensions Efficacy, Achievement Orientation, and Vision.
Acknowledgements

Completion of this thesis is a symbol of coming to the end of a journey and beginning a new life. In the years since embarking upon my journey, I have learned more than ever before, worked harder than ever before, and experienced life more fully than ever before. It has been a difficult time and a beautiful time, during which I have been blessed with the love and support of my family and my friends...without the beautiful people in my life I could not have come so far.

When I started my journey, I lived in another world, so very far from here. In that world, I was one of many women who struggled desperately to feed our children, who tried so hard to find happiness in our poor community, and who tried to learn and to teach the lessons of peace. The women of Wai‘anae inspired me to go on in my life, to reach higher and to become the best person I could be. To Judy Cocquio and Anna McAnany I owe my deepest gratitude and love. To the other women of Wai‘anae, especially Ho‘oiipo DeCambia, Karen Shimubukuro, Shelley Enos, and Sandy Vierra, I could not have done any of this with out you.
Throughout the last three years, my family has been a source of love and support. My mother’s quiet strength and encouragement enabled me to follow my heart. My father’s faith in my ability helped me to weather some difficult times, and his excitement has been contagious. To both of my parents, thank you so very very much.

My children have lived through the writing of this thesis almost as fully as I have. They have helped in all the ways they could: Becky has helped with the younger ones and understood why I needed to work so much; Sean has taken on chores without even being asked, and cheered me up when I was frustrated; and Sarah has found wonderful ways to work quietly and peacefully beside me. For their patience, their help, and their love throughout I thank them from the bottom of my heart.

During the years at Case Western Reserve, I have learned so much from so many people. I would like to thank my teachers and colleagues, especially Dave Kolb, Retta Holdorf, Joyce Osland, Eric Neilsen and Scott Cowen, all of whom helped and guided me along the way.
And, a special thanks to Cecilia McMillen, whose love and laughter and uncommonly good sense brightened some cloudy Cleveland days.

One person, more than any other, has helped and guided me as I learned and struggled with research and writing. To my teacher, Richard Boyatzis, I give thanks and friendship forever.

And, finally, I want to thank the person who has travelled this journey with me, who has walked every step and faced each new transition with strength and joy. Without his faithful support and endless patience, I would not have learned nearly as much as I have about work, about life, or about love. He has shared with me his insight, his laughter, his love, and his life...To Michael London I dedicate this thesis.
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Chapter One

Introduction to the Study of Individual Differences in Planning for the Future

The topic of planning holds a prominent place in the literature of management science and organizational thought. Certainly from Fayol (1916) on, planning has been recognized as a key component of the management process, and one that needs to be understood, attended to, and developed. According to Bandura,

> It is the expanded time perspective and symbolization of futures afforded by cognition that increase the prospects of human survival. Had humans been ruled solely by immediate consequences, they would have long ago destroyed most of the ecological supports of life... However, the power of anticipative control must be enhanced by developing better methods for forecasting distal consequences and stronger social mechanisms for bringing projected consequences to bear on current behavior to keep us off self-destructive courses (1989b, p.1181).

In order to better understand the process of forethought and planning, both psychological and organizational researchers have concentrated on the study of human thoughts and behavior related to planning. Freud, Skinner, and Bandura, as well as
Taylor, Odiorne, and Locke have likened the process of planning to the process of identifying and attaining goals. In fact, when the planning process has been examined, most researchers have assumed that outlining specific goals is the only effective way of dealing with the future, and that all people engage in this process in a similar fashion.

McCaskey (1975) challenged the assumption that setting goals is the best and only way to plan. Instead, he proposed that there are at least two different approaches to planning for the future: one involves setting specific goals, and the other focuses on identifying a general direction and a purpose to strive for.

The goal setting approach to planning is rational, analytical, and focused on a specific outcome. McCaskey noted that once a goal is determined, activities and time can be prioritized, and life space can be structured. With little effort wasted exploring alternatives, this method makes efficient use of energy and resources, and often results in attaining a goal.

The strengths of this approach can, under certain circumstances, be limitations as well. Many managers are faced with the need to plan far into the future,
often when conditions are uncertain, change is imminent, and it is literally impossible to set specific goals. Furthermore, some people tend not to use a rational approach to planning, no matter what the situation.

McCaskey proposed directional planning as an alternative way of planning for the future that would correct some of the deficiencies in the goal setting approach. Directional planning is characterized by a more open and flexible approach to the future that allows individuals to outline a larger purpose on which to focus their energies. Directional planning calls on the individual to see the "big picture" and to recognize how today’s activities affect tomorrow’s situations. It involves outlining a general area of purpose, within which people can organize integrated activities. In essence, directional planning allows each individual to approach the future in a unique way, focusing on different purposes and enacting them in different ways.

Inherent in McCaskey’s work and this study is the assumption that there are individual differences that affect how people plan for the future. While the issue of individual differences in planning has been raised
in the literature on goal setting, there is much
disagreement regarding first, which personality
attributes affect the process, and second, how
individual differences affect planning. The studies
reported in this work were designed to explore
individual differences that affect how people plan for
the future.

Development of the Theory and Study Designs

The series of studies reported herein are the
result of progressive research. Study One was designed
to identify individual differences and styles of
planning, and Studies Two and Three were designed to
test hypotheses relating planning styles to personality
and behavioral variables. Study Four, reported in
Chapter Six, was conducted in an attempt to integrate
the findings of the three previous studies and to
address some of the problems found at various stages of
the research.

Study One was designed to discover individual
differences that affect the process of planning for the
future and to determine whether these factors could be
used to identify planning styles. The study was
designed with the assumption that a person’s need for
achievement and action orientation would be critical factors affecting the planning process. It was also assumed that other factors affecting the planning process would be related to one or both of these criteria.

Upon completion of Study One, it appeared that there were several psychological and behavioral factors that affected the process of planning. These factors were statistically related to the need for achievement and action orientation, and they could be scored in such a way as to identify planning styles. The results were encouraging, yet even at this early stage there were indications that the methodology used to assign planning styles might be problematic, and that the achievement motivation-action orientation model of individual differences in planning might be in need of modification. Specifically, it became evident at this point that action orientation actually represented efficacy, and that it was this new construct that was central to the planning process.

Despite these problems and minor modifications, the results of the study were promising and two follow up studies were designed to expand the understanding of individual differences and styles of planning for the
future. Studies Two and Three were designed to validate the planning styles by determining the relationship of each style to personality variables and behavior. The designs of both studies were based on the theory that need for achievement and efficacy are basic to the planning process, and hypotheses were developed with this in mind. The studies were designed to utilize the method of assigning individuals a planning style that was developed in Study One.

Studies Two and Three required extensive personal contact with participants. During the months when data were collected, people were asked to talk about their plans for the future, write about them, explain the whys and wherefores, and to generally analyze their own process of planning. At this time, the concepts, variables, and planning styles identified in Study One were introduced and talked about with people in terms of what fit and what did not. This process sparked many new ideas and led to modifications of both the theory and the design of the project.

Two notable insights about the methodology and theoretical framework of this research were gleaned from the process of interviewing participants and teaching about individual differences in planning. The
first insight related to the methodology of assigning individuals a planning style. In talking with participants and reviewing written material about their plans, it became apparent that assigning a discrete style of planning might be too rigid a system, and might not be the most useful way to understand how individuals differ in their planning processes.

The second notable insight gained as the research progressed related to the basic constructs and the theoretical foundation of the study. While interview and other qualitative data indicated that the basic construct need for achievement related meaningfully to planning, action orientation was not as strongly linked. As interviews were conducted and people talked about their plans, another variable seemed to emerge and come to the fore as the second critical factor affecting the planning process. This variable, efficacy, seemed to greatly affect how people thought about the future, what they would consider doing, how tenacious they tended to be and how likely they were to take risks. Examination of the scale used to measure action orientation resulted in the discovery that the scale may also measure efficacy: all of the key behaviors associated with efficacy are included in the
scale. Therefore, the transition from action orientation to efficacy followed a natural progression in this research.

Tangential to the discovery of efficacy as a critical factor in the planning process was the recognition that one other variable, people’s ability to envision the future, strongly affected how they planned. It was so clear in interviews that some people saw a limited, narrow future, while others saw a broader view, and that these differing views affected their plans and planning processes. Neither efficacy or the need for achievement accounted fully for the behaviors and thoughts related to people’s visions of the future, although both constructs included reference to how people visualize the future. Therefore, the concept of vision was introduced as a third very important factor affecting individual differences in planning. Despite the fact that recognition and understanding of vision as a critical variable came late in the research process, a discussion and review of the construct is included in the review of the literature in Chapter Two. This section was included to give the reader a sense of where the research was heading and how it would eventually develop.
Studies Two and Three were conducted concurrently, and unfortunately could not be modified midstream to fully incorporate the new understandings about the theory or the methodology. As can be seen in Chapters Four and Five, the results of both studies were not as rich as had been hoped. In many cases, results were either sketchy or unexpected; these results served to reinforce growing concerns about the methodology and the model of discrete planning styles.

In order to address the concerns, a fourth study was conducted and is presented in Chapter Six. This latest study attempted to address the problems inherent in the theoretical framework and the methodologies used in the previous studies. Study Four drew on combined data banks from Studies One and Two, and employed factor analysis to identify components of the planning process. In essence, the study began by reconceptualizing the model of individual differences in planning: rather than employing a model depicting discrete styles, the model depicted dimensions of the planning process. The dimensions discovered as a result of this research support the original theory which proposed achievement orientation and efficacy as two critical factors in planning. In addition to this,
the analysis led to the confirmation of vision as a third critical factor in the planning process.

In summary, this work is comprised of four studies, three of which explored individual differences in planning in terms of styles, and one which explored the topic in terms of dimensions. The theoretical framework upon which the first studies were based identified need for achievement and action orientation as basic factors affecting the planning process. Results of the studies and qualitative research led to modifying the theory: efficacy replaced action orientation as a critical component of the planning process and vision was included as a dimension that should be researched.

In order to ground all studies in recent research and literature, five areas will be covered in the following review of the literature. As a general basis from which to start a study on planning, the literature on goal setting will be reviewed. Then, each of the three critical variables, need for achievement, efficacy, and vision, will be discussed. Finally, literature will be cited which links other psychological and behavioral factors to the planning process.
Scope of the Studies

The studies reported herein were designed to elucidate the process of planning for the future and to explore need for achievement, action orientation, efficacy, vision, and other psychological factors which might affect a person's process of planning. The process of planning for the future is a complex one, involving abstract thought, motivation and action. The processes of vision, motivation and behavior are engaged in by people, people who have different cultural backgrounds, values, training, motives, and personality styles. Mediating all of these will be the person's sense of how capable she is, and beliefs about how likely she is to reach the future state envisioned. Because of the complexity inherent in studying the individual psychology involved in the task of planning for the future, this study has controlled for several factors most likely to affect the process of planning: the choice of goal; cultural background; and age.

Although how and why people choose a certain goal is certainly an important component of planning, this thesis does not address the particular goals people choose or why they choose them. It does, however,
address the process they employ in planning to attain their goals.

The study does not focus on cultural factors which might affect the process of goal attainment, although it seems quite obvious that values, beliefs and accepted modes of behavior will have significant impact on how one envisions and plans for the future. These conditions, to be studied at a later date, require a heterogeneous sample with respect to race, ethnicity and nationality. At this point in time, it seemed practical to concentrate on studying individual differences among groups of people who shared basically the same cultural background.

Along with culture, age and stage in life are also major factors influencing the process of planning for the future. While these factors will be studied at a later date, the decision was made to control for the conditions by studying people who were generally the same age and facing similar life tasks.

In summary, this study focuses on individual personality differences that might affect the process of planning for the future. Conditions such as how and why people choose certain goals, cultural background
and age have been controlled, and do not enter into this research.

**Summary**

This work represents two and one half years of study, research and writing. Inspired by McCaskey’s conceptualization of planning without goals, the current research was an attempt to identify specific, measurable differences in the ways people plan for the future. The first study was exploratory and encouraging; the second and third built upon results of the first. The fourth study was designed to incorporate all of the learning gleaned from the previous studies and from qualitative research, and to modify the theory and methodology accordingly. It is hoped that this latest model will aid in the systematic research of individual differences in planning for the future.
Chapter Two
Review of the Literature

Goal Setting Theory
Social Motives and the Need for Achievement
Social Learning Theory and Efficacy

Goal Setting Theory
Goal setting theory is grounded in the academic traditions of the Wurzburg School and Lewin, both of which concentrated on the related concepts of intention, mental set, aspiration and task (see Ryan, 1970 for a summary). The theory was concurrently developed in the organizational sciences field, beginning with Frederick W. Taylor (1911, 1967) and the Scientific Management movement, and moving forward to the Management by Objectives programs proposed by Odiorne (1979). Locke was instrumental in the merging of the academic and organizational traditions when, in 1968, he published the seminal work on the goal setting theory. Over the years, this theory has become one of the best documented, best validated and more
universally accepted theories in the fields of human and organizational behavior. The theory has inspired research in a number of areas related to the nature of goals, motivation, and task performance (see Locke, Shaw, Saari, and Latham, 1981, for a review). The theory has also inspired the development of increasingly influential theories explaining human behavior, such as Bandura's social learning theory (1977).

Put simply, the goal setting theory postulates that goals regulate human behavior by providing an object of purpose or intent. Underlying the theory is the assumption that people are purposeful in their behavior, and that once a purpose is identified, behavior is directed toward the object of intent, or in the language of the theory, toward attaining the goal. Furthermore, the theory states that the degree to which a goal is clearly defined and challenging affects performance (Locke 1968; Kolb & Boyatzis, 1970; Matsui, Okada & Mizuguchi, 1981; Bandura, 1983; Garland, 1985; Mento, Steel & Karren, 1987; for a review see Locke, et. al, 1981).

Despite the abundance of evidence linking clear, challenging goals with successful performance, the
theory does not propose a direct, one to one relationship between setting a goal and success. It is recognized that human and environmental factors can affect behavior and enhance or interfere with performance, and that these factors must be considered intermediary when attempting to predict the behavior and performance of the individual. To this end, much of the research conducted to date deals with the relationship between goals and performance, and mediating factors such as feedback, participation, rewards, and individual psychological differences (see Hollenbeck & Brief, 1987 for a review).

In an attempt to carry this research a step further, this study deals with individual psychological differences that mediate between goals and behavior. It is postulated that individual psychological differences affect the goal setting process and in effect determine the process of planning for the future (Locke et. al., 1981; Hollenbeck & Brief, 1987).

It is important at this point to note the difference between goals, and plans. The former, being the object of intent, orient the individual toward the future in a purposeful manner. Plans, however, are the
means by which the individual intends to attain the goal. Von Neumann defines a plan as

a course of action which can be carried into effect, which can be expected to lead to the attainment of ends sought, and which someone intends to carry into effect (1964, p. 314).

There is no agreement as to the precise nature of this process, yet it stands to reason that such a cognitively complex activity will involve a host of factors, both environmental and personal. In fact, we must assume that the process of planning will be dependent upon and affected by the individual’s cultural background, age and stage in life, history, and a host of psychological factors. These psychological factors are the object of the current research.

Returning to goal setting theory for direction in the search for individual differences that affect the process of planning, it is disconcerting to note that "the only consistent thing about the studies of individual differences in goal setting is their inconsistency" (Locke, et al., 1981, p. 142). In their review of individual differences studies, Locke et al. noted that early studies reporting on individual differences in goal setting were not specifically
designed to study these variables, and results should be interpreted with caution. Furthermore, many of the studies reported on variables with little or no theoretical rationale explaining the relationship to goal setting.

Another problem affecting the studies of individual differences in goal setting relates to the inconsistency of measurement instruments. In effect, different results in different studies may be more a function of the instruments used than of the people studied. Finally, individual differences and psychological factors have often been interpreted with little or no attention paid to other psychological factors present. When reporting on difference variables, researchers have not often included reports or explanations of the intercorrelations between them.

There appear to be two areas of inquiry that have not been as susceptible to investigators' critiques. These exceptions involve the studies which identify need for achievement and self esteem as primary factors affecting the goal setting process. According to Locke et al. (1981) and Hollenbeck & Brief (1987), these factors are worthy of further study due to the fact that they are both grounded in theory and it seems
logical that either one could affect the goal setting process. (McClelland, Atkinson, Clark, & Lowell, 1953; Atkinson, 1958; McClelland & Winter, 1971; also see McClelland, 1985 for a review; and Bandura, 1977, 1982, 1989a).

A note of clarification is in order regarding the definition of self esteem. Self esteem as Locke describes it is taken to be functionally equivalent to the concept of self efficacy as proposed by Bandura (1982; Gist, 1987). While Locke does not explicitly link the two concepts, examination of the efficacy literature and the concept of self esteem described in Locke’s work indicate that the concepts are extremely similar. Hollenbeck & Brief (1987) elaborate upon this connection in their recent article on individual differences: the treatise on generalized self esteem, self perceptions of task specific abilities, and locus of control looks very much like Bandura’s concept of self efficacy.

We are accepting Locke’s position that need for achievement and self esteem, or self efficacy, are two of the most promising variables in the study of individual differences in goal setting and planning. Interestingly, many other individual difference
variables studied to date relate to either need for achievement or self efficacy. In an attempt to bring some order and coherence to a summary of research on individual differences in planning, the following review will concentrate first on need for achievement and efficacy, as the primary factors affecting the individual process of planning for the future. Following this, a section has been included citing literature and studies relating the process of forethought to planning.

Finally, relevant literature will be reviewed, including studies that have reported on other individual psychological factors affecting the goal setting process. The variables identified in these studies will be linked conceptually to either need for achievement or to self efficacy, for these variables are thought to form the basis of a model explaining individual differences in planning for the future.

**Need for Achievement**

Need for achievement is a component of the social motives theory proposed by McClelland (1985). A social motive is defined as a learned drive which energizes a person, and orients or directs behavior toward a
selected target (Melton, in McClelland & Steele, 1973). A motive disposition is "...a recurrent concern for a goal state based on a natural incentive--a concern that energizes, orients and selects behavior" (McClelland, 1985, p. 590). The motive disposition is learned over time through repeated exposure to the norms, mores and values of a culture. And, it is considered natural in the sense that it has, through learning and conditioning, become the automatic response to environmental stimuli.

Need for achievement is the motive disposition which focuses people's thoughts, energy and behavior on striving for excellence, trying to perform well, and attaining success (McClelland, 1985). In simplest terms, this is the "do better" motive: the person motivated by need for achievement will always be trying to excel in comparison to a high standard.

Given the choice, people who are high in need for achievement tend to engage in activities related to that motive. These people are also more likely to organize their environment to ensure successful completion of achievement related activities (Weiner, 1969). In fact, successful completion of a task might be considered a key component of the need for
achievement motive. Generally speaking, people who are highly motivated by this need seek successful completion of tasks and engage in activities that will ensure success (Mclelland, 1985).

In the case of planning, the person high in need for achievement will organize his activities and the environments in such a way as to facilitate goal attainment. First, he will choose a goal that is moderately challenging: one that is worth striving for, but promises the opportunity for success. He will outline a series of small steps, or subgoals, in order to be able to mark progress toward the goal. He will investigate the environment, and develop plans to capitalize on opportunities and overcome obstacles. He will realistically assess his own strengths and weaknesses, and develop action plans to deal with them. He is persistent in pursuit of success. In short, the person high in need for achievement will plan for successful completion of a task in a straightforward, fairly linear fashion. If the task happens to be goal attainment, behaviors will be directed at and focused on this end. In essence, the need for achievement directs a person’s behavior toward goal attainment and defines a natural process of planning for the future.
(McClelland, Atkinson, Clark, & Lowell, 1953; Atkinson, 1958; McClelland & Winter, 1971; McClelland, 1976; McClelland, 1985).

**Efficacy**

The concept of self efficacy as defined by Bandura (1977, 1982, 1989 a,b; also see Gist, 1987, for a review) is central to the increasingly influential social learning theory, more recently termed "social cognitive theory". The underlying assumption of this theory is that people have the capacity to exercise control over their own thoughts, and that cognitive, vicarious, self-reflective and self-regulatory processes act together with environmental events to direct, organize and determine behavior. Efficacy, or the beliefs an individual holds regarding his or her capabilities, is the central factor affecting the cognitive processes that in part guide and direct behavior (Bigoness, Keef & Dubose, 1988; Bandura, 1989b).

In social cognitive theory, the self is considered neither a sole agent in determining behavior, nor is it understood to be at the mercy of environmental forces. This concept, termed emergent interactive agency
(Bandura, 1989b), addresses the deficiencies in the autonomous and mechanistic models of human agency.

While the autonomous or Freudian model of agency would have the individual as sole determinant of behavior, the mechanistic, Skinnerian model would have the individual a pawn of circumstances, responding blindly to stimuli. The emergent interactive model of human agency attempts to unite these approaches by recognizing both the external environmental forces as well as the internal cognitive and affective processes which affect behavior. According to the integrated theory, people interact with the environment, consider it, reflect upon their own motivation, affect, and thought processes and act accordingly. People are not separated from their environment, are not autonomous agents totally in control of the environment, and are not totally under the control of external forces either.

Of the mechanisms or processes that affect agency, efficacy may be the most central. Efficacy is most simply defined as beliefs about one’s capabilities, which affect the thought processes one engages in and subsequent actions as well. Development of efficacy beliefs requires time: whether one’s beliefs are in
the direction of personal power or weakness, these are
the result of accumulated experiences and cognitions.
The process of judging personal ability and
capabilities is affected by past experiences, vicarious
experience of other’s success or failures, verbal
persuasion and evaluation of one’s physiological states
(Bandura, 1989b; Gist, 1987). The development of
efficacy beliefs is the result of complex processes of
self persuasion based on cognitive processing of
information from a variety of sources over time.

These include performance mastery experiences,
vicarious experiences for judging capabilities in
comparison with performances of others, verbal
persuasion and allied types of social influences
indicating that one possesses certain
capabilities; and physiological states from which
one may partly judge one’s capabilities, strength,
and vulnerability (Bandura, 1989b, p. 1179).

In short, efficacy is a mediating variable which
affects knowledge, cognitive and transformational
processes, skills, and ultimately performance.
Efficacy beliefs affect which activities people choose
to engage in, which environments they choose to act in,
how much effort they choose to give to tasks, how long
to engage in difficult activities, and how they
envision the future. (Bandura, 1982, 1989a, 1989b;
Taylor, 1989; Gist, 1987; Mento, Cartledge & Locke, 1980). Judgments of one's capabilities is a circular process; efficacy determines choice of activities, skill and knowledge acquisition, learning and mastery. Mastery increases efficacy and subsequent visions of the future.

"Self-efficacy judgments, whether accurate or faulty, influence choice of activities and environmental settings" (Bandura, 1982, p.123). As a rule, people avoid environments and activities that they feel unable to cope with, and enter into activities they feel are challenging but manageable (Locke, Frederick & Bobko, 1984). This facet of efficacy is particularly important when considering career choices. The choices made today about what school to go to, what position to take, and what projects to take on do, in large part, determine future courses of action. "Self limitation of career development arises more from perceived self-inefficacy than from actual inability" (Bandura, 1989b, p.1179).

While research shows that for the most part, the higher the level of efficacy the more likely is the performance to be successful, it is obvious that a modicum of uncertainty about one's abilities is healthy
(Bandura, 1982). Some doubt encourages a person to try harder, to learn, and to explore the environment in order to discover opportunities and anticipate obstacles. At the same time, uncertainty hinders the performance of familiar activities.

An aid to good performance is a strong sense of self-efficacy to withstand failures coupled with some uncertainty (construed in terms of the challenge of the task, rather than fundamental doubts about one’s capabilities) to spur preparatory acquisition of knowledge and skills (Bandura, 1982 p.123).

People who have faith in their abilities to succeed will increase their efforts when faced with failures or difficulties; people who are unsure of their abilities will quit. Said another way, efficacy affects how the goals chosen in the beginning will change, become more or less challenging or stay the same. Whereas the person high in efficacy will adjust her behavior in light of new information to insure success, the person experiencing ineffectiveness will concentrate on the failure experience, may not adjust behavior as necessary, or will give up prematurely (Bandura, 1982; Gist, 1987).

Finally, efficacy in part determines how people envision the future. Those with a strong sense of
efficacy envision success, while those who perceive themselves to be inefficacious envision obstacles or failure (Cervone, 1989).

The relationship of efficacy to the processes of planning and goal setting is articulated by Bandura:

Much human behavior is regulated by forethought embodying cognized goals, and personal goal setting is influenced by self-appraisal of capabilities. The stronger their perceived self-efficacy, the higher the goals people set for themselves and the firmer their commitment to them (Bandura, 1989b, p. 1175).

In addition to its effect on the type of goals people set for themselves, efficacy will affect the level of effort directed toward goal attainment, flexibility and adaptability in the face of changing circumstances, and how far into the future one is able to envision (Bandura, 1989b, 1982; Cervone, 1989).

According to Bandura, goals are not direct motivators of action. Rather, forethought and the cognitive processes involved in self referent thought mediate between goals and action. Goals allow for self-evaluation, if not in the immediate evaluation of goal attainment, then by allowing for the development of
subgoals which can serve as milestones or standards to meet.

In social cognitive theory goal setting and self evaluative reaction are considered intervening factors affecting motivation and the desire to continue to engage in activities (see Bandura, 1977). The process of setting performance standards allows a person to monitor and adjust actions in order to maximize the probability of performing successfully. This is a motivating process: success leads to efficacy which leads to the desire to continue to act. The best way to insure that this happens, according to Bandura, is for a person to set up a series of attainable subgoals that are in line with a larger goal. Subgoals provide measurable markers of success or failure: attainment of a subgoal is perceived as success and leads to the desire to continue along that path. Recognition of failure signals the need to change behaviors. Subgoals are necessary because people need to experience success in the short term in order to continue to feel efficacious.

Whereas proximal subgoals provide immediate incentives and guides for action, distal goals are too far removed in time to effectively mobilize effort of to direct what one does in the here and now (Bandura, 1982, p.134).
This leads to the question of the relevance of a person's time frame of reference: for some people, subgoals have to be set in the here and now or they no longer serve to motivate behavior. Other people can continue to feel motivated by reflecting upon the ultimate goal even in the absence of feedback. Efficacy may be a moderating variable in this process: a strong sense of efficacy allows one to follow a course of action without the clear, short term markers that subgoals provide.

In summary, studies and reviews of the literature on efficacy contribute substantially to our understanding of how efficacy can affect the process of planning for the future (Bandura, 1982, 1989 a,b; Gist, 1987). Clearly, which environments one chooses to be in, how much effort to expend on a task or goals, how long to persist, whether or not to set up a series of subgoals, and how long to persist at a task are behaviors that will contribute to the planning process. So too, will the degree of flexibility or adaptability a person is comfortable with, and how far into the future he visualizes. In short, in order to choose a challenging environment, take on a new task, learn a
new skill or be creative, a person must believe that she can achieve the desired end.

**Vision**

Integral to both the need for achievement and efficacy is the capacity to envision the future, to imagine the consequences of today’s actions on tomorrow’s outcomes, and to create a mental picture of a future state. Vision is a symbolic activity. As one moves toward a goal, it is not real, can not be seen or experienced. Nevertheless, through a process of symbolic activity, the vision becomes tangible in the sense that it is experienced cognitively and thus directs and guides behavior.

...by being represented cognitively in the present, conceived future events are converted into current motivators and regulators of behavior. Forethought is translated into incentives and guides for action through the aid of self-regulatory mechanisms (Bandura, 1989b, p.1179).

People are constantly in the process of assessing current situations and the present environment in order to make predictions about what will happen in the future. Into this equation goes cognitive processing
of information from a wide variety of sources both internal and external. In attempting to predict and plan for the future, people draw on existing knowledge about what it is they want in the future, knowledge about their capabilities, and knowledge about the environment. This knowledge is a compilation of past experiences, observations, and hypotheses: a complex and most certainly individualized set of beliefs.

Forethought, when considered a highly individualized process, will affect planning to the extent that some people conceptualize the future in concrete, specific terms, while others will envision a more vague future state. Certain individuals will envision a process of goal attainment that involves a set of clearly identified steps to a clearly defined goal, while others will envision their future as a developmental process. And of course, some people will see far into the future, and others will have trouble envisioning next week.

When envisioning success, efficacy is high and goal attainment more likely. When envisioning failure, efficacy is diminished and goals are less likely to be attained (Cervone, 1989). By thinking ahead, people guide actions in anticipation of success or failure.
For the efficacious person, this process actually becomes a motivating factor: I am acting because this action will help me to reach my goal.

The capacity to engage in forethought is related to both efficacy and the need for achievement, and could be critical to the planning process. Envisioned as a circular process, planning would include a vision of the future, a motivating force directing actions toward a future state and the belief that one is capable of attaining that state.

**Other Individual Factors Affecting the Process of Planning**

In addition to the work of Locke, Hollenbeck, Bandura and McClelland, a number of studies have addressed the issue of individual differences in the process of goal setting and planning. Many of these studies focused on the achievement motive, efficacy, vision, and/or the ability to develop an action plan directed toward goal achievement (Boyatzis, 1982; Campion & Lord, 1982; Hollenbeck, Williams & Klein, 1989). The most conclusive finding of these studies is that the combination of the motivation to achieve
success, a sense of efficacy, and the ability to develop workable action plans leads to goal attainment. Additional individual factors have been found to relate to the process of setting goals and performance. Hollenbeck and colleagues found that commitment, self esteem, and task specific ability affect the choice of goal as well as performance (Hollenbeck & Brief, 1987; Hollenbeck & Klein 1987; Hollenbeck, Williams & Klein, 1989). These variables may well be related to the generalized concept of efficacy, as the studies report that those whose self esteem is high, who consider themselves to be skilled, and who are committed to the goal are more likely to succeed.

Terborg (1986) reported that an individual’s level of effort and degree of awareness of the environment affected performance. This, too, relates to the concept of efficacy, and quite possibly to the achievement motive as well: people who are efficacious and motivated by achievement would be likely to persist longer at a task and attain their goals.

Locus of control, a similar construct to efficacy, has also been linked to the goal setting process (Hollenbeck, Williams & Klein, 1989; Shalley & Oldham, 1985).
Kolb & Boyatzis (1970) reported that conscious goal setting, the ability to visualize the future and expectation of success affected goal attainment. In linking the goal setting process with efficacy and vision, the study seemed to indicate the relationship of these variables to the planning process.

Finally, McCaskey (1974) suggested that cognitive complexity, flexibility, adaptability, and sensitivity to the environment are factors which affect a person's style of planning for the future. These variables seem to relate to both efficacy and the ability to envision the future.

Summary

The literature related to planning for the future is embedded in three theoretical frameworks: goal setting theory, social motives theory, and social cognitive theory. Goal setting theory has focused primarily on studying how goals affect outcomes and performance. Within this literature is considerable reference to individual psychological differences that appear to affect the goal setting process.
While a number of individual differences have been identified and studied peripherally, only two of these have been connected both theoretically and empirically to the process of goal setting. First, the need for achievement seems in part to determine the behavior a person engages in while trying to attain a goal. Secondly, efficacy appears to affect what actions people take, how long they persist in the face of challenges, and, possibly, ultimate outcomes.

A final factor affecting the planning process is alluded to in all three bodies of literature. This factor, vision, has been the object of limited study to date, but bears further exploration.

Based on the research conducted on planning and goal setting, it is proposed that there are individual differences in how people plan for the future. These differences may be determined in part by need for achievement, efficacy, and possibly by how a person envisions the future. To explore this model, four studies were conducted and are presented in the ensuing chapters.
Chapter Three

Study 1: Individual Differences and Styles of Planning for the Future

This study was an exploration of individual differences that affect the process of planning. The study was designed to explore whether there are individual differences in the ways people plan for the future, and if these differences form patterns indicative of planning styles.

The basic framework upon which the study was based revolved around the concepts of need for achievement (McClelland, 1985), and efficacy (Bandura, 1977, 1982 & 1989). It was assumed that first, there are differences in the ways people plan, and second, that individual differences in planning are related to need for achievement and/or efficacy. It was also expected that individual differences in planning could be explained in terms of styles, which are determined by a person's relative levels of need for achievement and efficacy.
The link between the need for achievement and the planning process is based on research conducted on the achievement motive (McClelland, Atkinson, Clark, & Lowell, 1953; Atkinson, 1958; McClelland, & Winter, 1971; McClelland, 1976; also see McClelland, 1985 for a summary). The research on this motive indicates that people who are high in need for achievement tend to engage in certain behaviors related to planning, such as identification of a goal, the use of subgoals, and anticipation of opportunities and obstacles. It was expected that these behaviors would in part help to define styles of planning.

The link between efficacy and the planning process was based originally on Boyatzis (1982) understanding of proactivity. His definition of this concept incorporates the tendencies to take action when faced with challenges, to take risks, and to be persistent. These qualities were expected to manifest themselves in the planning process as an orientation toward action and efficacious behavior.

In summary, the study was designed to identify individual differences in planning, and to determine whether these differences are stylistically related to
the need for achievement or efficacy. The research questions addressed by this study were:

1. Are there individual differences in the ways people plan for the future?
2. Are individual differences in how people plan related to the achievement motive and/or efficacy?
3. Are there discrete styles of planning for the future?
Method

This study was comprised of two stages. In the first stage, written responses to questions about planning for the future were thematically analyzed to identify variables related to the process of planning. Then, these variables were tested statistically to determine their relationships to the criterion variables need for achievement and/or efficacy. Finally, the variables that related to the criterion variables were used to define planning styles.

In the second stage of the study, planning styles were compared statistically to variables thought to be related to the need for achievement and efficacy, as well as to other variables that could affect planning to a lesser degree. It was expected that the analysis would yield information as to the nature of the planning styles and personality attributes that might be associated with them.
Sample

In August, 1987, Master's of Business Administration students were administered a battery of assessment instruments during an orientation session. The 72 students tested represented 72% of the incoming class, and examination of demographic variables indicated that the sample was typical of the class as a whole. 69% of the students tested were male and 31% were female. 20% were foreign students, representing both Asian and European countries. The median age of the students was 26. All students were enrolled full time, with the stated intention of obtaining an MBA within two years.

Assessment Instruments

The students were administered four tests: (1) a questionnaire entitled "Thinking About the Future" (Boyatzis, 1987); (2) the Learning Style Inventory (Kolb, 1984, 1989); (3) the Thematic Apperception Test (McClelland, 1985) and The Executive Skills Profile (Boyatzis and Kolb, in press).

"Thinking About the Future" is a questionnaire consisting of five questions which participants
responded to in writing over a thirty minute time period. The questions were:

1. What do you plan to do during the next two years?
2. Why do you plan on doing these things during the next two years?
3. How do you feel about your plan?
4. What may get in your way as you work on your plan over the next two years?
5. What sources of help or assistance have you considered?

Each question was timed, and students were instructed not to go on to the next question before the end of the time period. Responses to the questions were analyzed and a code developed to measure variables associated with the planning process.

The Learning Style Inventory (LSI) is a nine item instrument which measures a person’s preferred style of learning. Each of the items is a set of four descriptive words; respondents were asked to rank each set according to how well each word characterizes their preferences in learning. Scores indicate the degree of preference for learning through Concrete Experience,
Reflective Observation, Abstract Conceptualization or Active Experimentation.

The Thematic Apperception Test (TAT) is a projective test of motives in which respondents were asked to briefly view a picture and write a story about what is happening, who is involved, etc. The version of the TAT used in this study included six pictures, which participants wrote about during a thirty minute period. The stories were scored for Achievement, Affiliation, and Power motives, using a standard coding system. The coder had established interrater reliability (Atkinson, 1958; Winter, 1973) with resultant Kendall Tau scores of .95 for the achievement motive, .92 for the affiliation motive, and .94 for the power motive. To control for error due to length of protocol, motive scores were standardized using the regression coefficient of the number of words (Winter, 1973).

The Executive Skills Profile is a Q-sort exercise in which respondents were asked to sort cards into as many as seven categories. Each of the seventy-two cards has a description of a managerial skill or activity typed on it, and the sorting categories are statements of skill level. Categories range from
(1) "I have no skill or experience in this area to
(4) "I am a competent performer in this area" to (7) "I
am a leader or creator in this area". Participants
were instructed to use as many of the seven categories
as necessary to accurately represent their skill level.
The instrument was scored for each of the seventy-two
Items, twelve Scales and four Quadrants.

The Interpersonal Quadrant consists of Leadership
Skills, Relationship Skills, and Helping & Delegating
Skills. The Information Management Quadrant includes
Adapting Skills, Gathering Information Skills, and
Information Analysis Skills. The Analytical Quadrant
consists of Planning Skills, Quantitative Data Analysis
Skills, and Technology Management Skills. The Action
Quadrant encompasses Goal Setting & Decision Making
Skills, Taking Action Skills, and Entrepreneurial
Skills.

**Hypotheses**

This study was exploratory, and not all
relationships between planning styles and study
variables could be predicted. Still, several specific
hypotheses were posed, linking each of the four
planning styles to the need for achievement, efficacy, and one or more study variables.

**Hypothesis 1.a.** Planning Style 1 was expected to be characterized by Need for Achievement to a higher degree than Planning Styles 3 or 4.

**Hypothesis 1.b.** Planning Style 1 was expected to be characterized by Action Quadrant scores to a higher degree than Planning Styles 2 or 4.

**Hypothesis 1.c.** Planning Style 1 was expected to be characterized by Information Management Skills to a higher degree than Planning Styles 3 or 4.

**Hypothesis 2.a.** Planning Style 2 was expected to be characterized by Need for Achievement to a higher degree than Planning Styles 3 or 4.

**Hypothesis 2.b.** Planning Style 2 was expected to be characterized by Action Quadrant scores to a lesser degree than Planning Styles 1 or 3.
Hypothesis 2.c. Planning Style 2 was expected to be characterized by Analytical Skills to a higher degree than Planning Styles 3 or 4.

Hypothesis 2.d. Planning Style 2 was expected to be characterized by Abstract Conceptualization to a higher degree than Planning Styles 3 or 4.

Hypothesis 3.a. Planning Style 3 was expected to be characterized by Need for Achievement to a lesser degree than Planning Styles 1 or 2.

Hypothesis 3.b. Planning Style 3 was expected to be characterized by Action Quadrant scores to a higher degree than Planning Styles 2 or 4.

Hypothesis 3.c. Planning Style 3 was expected to be characterized by Interpersonal Skills to a higher degree than Planning Styles 2 or 4.

Hypothesis 3.d. Planning Style 3 was expected to be characterized by Need for Power to a higher degree than Planning Styles 2 or 4.
Hypothesis 4.a. Planning Style 4 was expected to be characterized by Need for Achievement to a lesser degree than Planning Styles 1 or 2.

Hypothesis 4.b. Planning Style 4 was expected to be characterized by Action Quadrant Scores to a lesser degree than Planning Styles 1 or 3.

Hypothesis 4.c. Planning Style 4 was expected to be characterized by Reflective Observation to a higher degree than Planning Styles 1 or 3.

Design

In the first stage of the study, individual differences in planning were identified through a process of thematic analysis and code development. Analysis of variance was used to test the relationships of code variables to the need for achievement and/or efficacy. Those code variables found to be related significantly to either the need for achievement or efficacy were used to determine planning styles.

In the second stage of the study, analysis of variance was used to test the relationships between planning styles and motive variables, skill variables,
and Learning Styles. The Bartlett-Box F test was used to
determine homogeneity of variances. The Duncan
Procedure was used to determine which pairs of means
were significantly different at the .05 level.

**Code Development**

Thematic analysis of data from the "Thinking About
the Future" questionnaires was based on an orthogonal
design using the Need for Achievement score (nAch) and
the Action Skills Quadrant score (Action). These two
scales were expected to relate to the achievement
motive and efficacy, respectively.

The need for achievement has been conceptually and
empirically related to behaviors associated with
planning. People high in the need for achievement tend
to identify clear, challenging goals, to outline
subgoals that will mark progress, and to anticipate
opportunities and obstacles (see McClelland, 1985 for
summary). Taken as a whole, these behaviors can be
seen as a natural process of planning.

The Action Quadrant of the ESP was thought to be
related to the efficacy dimension of the planning
process. The Quadrant consists of three skill scales:
Setting and Managing to Goals, Taking Action Skills,
and Entrepreneurial Skills. The Taking Action and Entrepreneurial Skill scales were originally based in part on Boyatzis’ (1982) concept of proactivity. As he defined it, proactivity is the skill level manifestation of the trait efficacy. Efficacy, then, is the degree to which people tend to see themselves as "...in control of their lives, and therefore responsible for taking action if there is a desire for events to unfold in a certain direction..." (Boyatzis, 1982, p.72).

Bandura’s concept of efficacy also includes the elements of internal control and direction of action (1989). He sees the efficacious individual as being inclined to take initiative, assume responsibility and be persistent in the face of challenges. These behaviors, as well as those outlined by Boyatzis in his discussion of proactivity, are incorporated into the Action Skills Quadrant and seem to be manifestations of a person’s sense of efficacy.

It is likely that the behaviors associated with efficacy such as the tendency to take risks, commit to goals, and take responsibility will have a direct effect on the process of planning. Like behaviors associated with need for achievement, it was expected
that behaviors linked to efficacy would in part help to define styles of planning.

In summary, the decision to use the Action Skills Quadrant score as an approximation of the construct efficacy was based on the similarity of the skills that comprise the Quadrant to the behaviors associated with efficacy. The decision to use the need for achievement score was based on the direct relationship of that motive to behaviors known to affect the planning process. In both cases, it was thought that the behaviors associated with the variables would differentiate groups of people and identify styles of planning for the future.

Median scores on nAch and Action were used as criteria to split the sample into four cells reflecting high and low scores on each variable (i.e. High nAch/High Action, High nAch/Low Action, Low nAch/High Action, and Low nAch/Low Action). Simply put, the criterion split represented high and low scores on the achievement motive and efficacy.
Table 3.1. Distribution of Extreme Cases According to Criterion: Need for Achievement and Action Skills

<table>
<thead>
<tr>
<th>Action</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>High nAch</td>
<td>High nAch</td>
<td>Low Action</td>
</tr>
<tr>
<td>High Action</td>
<td>n=4</td>
<td>n=3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low nAch</td>
<td>Low nAch</td>
<td></td>
</tr>
<tr>
<td>High Action</td>
<td>n=4</td>
<td>Low Action</td>
</tr>
<tr>
<td></td>
<td>n=4</td>
<td>n=4</td>
</tr>
</tbody>
</table>

Need for Achievement

Fifteen questionnaires representing extreme cases were selected to be used in code development. The fifteen individuals scored above or below the median on the criterion variables, and their scores were also extreme in relationship to the other variables measured in the TAT and ESP. For example, in order to be selected to represent the High nAch/High Action group, the individual had to meet the following requirements: nAch score higher than the median; Action Skills
Quadrant score higher than the median; nAch score higher than Need for Power or Need for Affiliation; and Action Skills score higher than Interpersonal, Information Management, and Analytical Skills scores.

Using this scheme, four questionnaires were selected to represent the high/nAch high Action cell. Three questionnaires were selected to represent the high nAch/low Action cell. Four questionnaires represented the low nAch/high Action cell, and four represented the low nAch/low Action cell. Table 3.1 summarizes the results of assigning extreme cases to cells, with the vertical axis representing nAch scores and the horizontal axis representing Action Skills Quadrant scores.

The fifteen questionnaires so selected were thematically analyzed, using a process of structured comparison and contrast. A code was developed to identify variables that relate to the planning process (see Appendix I. for the unabridged code).

The thematic analysis employed to identify these variables and to develop the code was a multi-step process of comparison and contrast resulting in identification of themes that differentiated cells from each other. Each interview was analyzed for salient
concepts, affect, perceptions and behaviors related to the planning process. Multiple levels were observed for each theme, and a numerical code was devised to measure the degree to which the theme was present in each interview.

At this point, the questionnaires were compared and contrasted to determine whether the themes differentiated one group of questionnaires from the others. If they did, they were considered valid themes and were converted into coding categories (see Boyatzis, 1982 for a model of this process).

As an illustration of the code development process consider the discovery and subsequent development of the variable Efficacy. The process outlined below resulted in the identification of this theme, and ultimately the determination of a coding category. Similar processes were used in the development of the other eight categories.

In the early stages of analyzing the questionnaires, it was noted that all participants gave some indication of how confident they felt about attaining their goals, and that confidence levels seemed to vary. This "theme" was noted when one person wrote "The real obstacle to any goal is mainly one’s
self. It is up to the individual to overcome barriers and difficulties". Another person wrote "I don't perceive there being any hurdles too high". Yet another wrote "I am excited about the opportunity to better myself...and the possibility of failure makes me somewhat nervous".

Noting that all the questionnaires included references to self confidence or the person's ability to achieve the goal, the theme was examined to determine whether people in different groups expressed different levels of self confidence. It was noted that people in the high Action groups (one and three) expressed a high level of self confidence, while those in the low action groups (two and four) expressed fear or dependence upon the environment for ultimate success.

At this point, the theme was labeled Efficacy. The label was determined by the theme's conceptual resemblance to self efficacy as identified by Bandura (1989). This was supported by several independent researchers, who were asked to categorize and label items related to the theme.

Further examination and the comparison-contrast process indicated that all responses related to
Efficacy could be categorized by one of three "levels". Level One was indicated by total reliance on the outside environment for goal attainment. Level Two was indicative of a sense of personal responsibility for goal attainment, and recognition that the environment or unforeseen events might get in the way. Level Three indicated expressions of total reliance on the self for goal attainment.

In summary, the process of developing the code variable Efficacy, as well as the other eight variables, followed a three step process. First, themes were identified by virtue of their appearance in most questionnaires. Then, themes were examined to determine whether their expression was different from one group to the next. Finally, themes were labeled, and an ordinal scale was developed that encompassed all responses.

The final version of the code consisted of nine variables: Efficacy, Activity Level, Awareness, Subgoals, Opportunities /Obstacles, Flexibility, Time Orientation, Clarity and Affect. Each variable could be measured as to the degree it was present in the questionnaire, as outlined below.
**Efficacy** is understood as the degree to which the individual feels in control of the plan and the outcome.

Level 3: Person totally in control of planning  
Level 2: Person and environment affect planning  
Level 1: Environment or others determine planning

**Awareness** indicates whether personal goals or interests are guiding the choice of goals.

Level 2: Interests or values are stated  
Level 1: Interests or values are not stated

**Activity Level** gauges the person’s involvement in activities unrelated to the goal.

Level 3: Four or more activities  
Level 2: One to three activities  
Level 1: 0 activities unrelated to goal

**Subgoals** indicates whether or not the individual identifies a series of steps necessary to follow in order to attain the goal.

Level 2: Subgoals outlined  
Level 1: Subgoals not present
**Opportunities/Obstacles** is a measure of whether the person recognizes and/or capitalizes on personal qualities or the environment in order to attain the goal.

- **Level 3:** Recognition of opportunities or obstacles and an action plan
- **Level 2:** Recognition of opportunities or obstacles
- **Level 1:** No recognition of opportunities or obstacles

**Flexibility** is a measure of willingness to change the plan or the goal.

- **Level 2:** Will change plans or goal
- **Level 1:** Will not change plans or goal

**Time Orientation** indicates whether the person envisions the future as far as goal attainment or beyond.

- **Level 2:** Envisions beyond goal attainment
- **Level 1:** Envisions to goal attainment
Clarity is understood as the degree to which the individual is specific when articulating a goal.

Level 3: The goal is a specific job/role
Level 2: The goal is the development of abilities
Level 1: The goal is a vague job/role

Affect is a measure of the individual’s emotional response to the plan or the goal.

Level 2: Positive affect
Level 1: Neutral or negative affect

After developing the code, interrater reliability of two independent coders was established for each of the code variables, using a subsample of 25 questionnaires. Kendall Tau scores ranged from .76 to .96 for the code variables, with a mean score of .87. After establishing interrater reliability, one researcher coded the 57 questionnaires not used in code development. The coding of these questionnaires was blind: the researcher was unaware of nAch or Action scores in order to insure unbiased coding.
Determining Planning Style

It was expected that code variables would form patterns reflective of the criterion variables and indicative of one of four styles of planning. Analysis of variance indicated that the variables Clarity, Time Orientation, Awareness, and Affect were not related significantly to Need for Achievement or the Action Skills Quadrant scores. Because the study was based on the assumption that code variables should relate to the achievement motive and/or efficacy, these four variables were not included in subsequent analyses.

Analysis of variance (ANOVA) indicated that the remaining five variables related significantly to the Need for Achievement and/or the Action Skills Quadrant scores. Subgoals and Opportunities/Obstacles accounted significantly for variance in Need for Achievement (df=1,70: F= 6.81, p=.011 and F=4.97, p=.029 respectively). Activity Level and Efficacy accounted significantly for variance in Action Skills scores (df=1,70 F=6.66, p=.012 and F=3.86, p=.026 respectively). Flexibility accounted near significantly for the interaction effect of high Need for Achievement, low Action Skills.
High-low splits on the code variables Opportunities/Obstacles and Activity Level resulted in close reflection of the criterion variable scores. So, it was determined that high or low scores on these variables would be required and would determine assignment to a planning style. An intensity scale of the sum of the scores on Efficacy, Subgoals and Flexibility was used to insure that each cell reflected the criterion variables and that some flexibility in individual scores would be possible. Table 3.2 illustrates the method employed to assign subjects to planning style.

Eleven subjects could not be assigned to a group. These subjects were scrutinized on study variables and well as demographic information such as age, gender, ethnicity, GMAT scores and GPA to determine whether there were any apparent confounding factors. The analysis showed no systematic differences between this group and other individuals, and the eleven subjects were dropped from the study leaving a total sample of 61.
Table 3.2. Method of Assigning Planning Styles Based on Code Variable Scores

<table>
<thead>
<tr>
<th>Variable</th>
<th>Scores Required for Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Style 1</td>
</tr>
<tr>
<td>Required Scores</td>
<td></td>
</tr>
<tr>
<td>Opportunities</td>
<td></td>
</tr>
<tr>
<td>/Obstacles</td>
<td>2</td>
</tr>
<tr>
<td>Activity Level</td>
<td>2</td>
</tr>
<tr>
<td>Intensity Scale</td>
<td></td>
</tr>
<tr>
<td>+Subgoals</td>
<td></td>
</tr>
<tr>
<td>+Efficacy</td>
<td></td>
</tr>
<tr>
<td>+Flexibility</td>
<td>5-7</td>
</tr>
</tbody>
</table>
Results

Application of the planning code and assignment of subjects to planning style resulted in identification of four planning styles. The distribution of subjects by planning style is presented in Table 3.3. At this point, it was possible to test the hypotheses relating planning styles to need for achievement, efficacy, and other study variables.

Table 3.3. Distribution of Subjects by Planning Style

<table>
<thead>
<tr>
<th>Planning Style</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style 1</td>
<td>10</td>
</tr>
<tr>
<td>Style 2</td>
<td>31</td>
</tr>
<tr>
<td>Style 3</td>
<td>7</td>
</tr>
<tr>
<td>Style 4</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
</tr>
</tbody>
</table>

Two of the three TAT Motive variables, three of four ESP Quadrant variables and six of twelve ESP Scale variables showed significant main effects with Planning Style. Two of six LSI variables showed near significant main effects. Summaries of significant
main effects appear in Table 3.4, 3.5, and 3.6; the means and standard deviations for all variables are presented in Appendix II.

As summarized in Chart 3.1, the Duncan Procedure indicated that Planning Styles were characterized to varying degrees by motive, skill, and learning style variables. The results of the analyses will be presented first in terms of hypothesis confirmed, partially confirmed, or disproved. Then, other results of the analyses will be presented. For the sake of convenience, the planning styles have been labelled according to their dominant characteristics. Henceforth, they will be referred to as follows: Planning Style 1 is Directional planning; Planning Style 2 is Goal Oriented planning; Planning Style 3 is Action Oriented planning; and Planning Style 4 is Reflective planning.
Table 3.4. Comparison of Planning Styles with Motive Variables: TAT Scores (df=3, 57; n=61)

<table>
<thead>
<tr>
<th>Motive Variable</th>
<th>Sums of Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between Within</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement</td>
<td>692</td>
<td>4001</td>
<td>3.29</td>
</tr>
<tr>
<td>Power</td>
<td>832</td>
<td>4518</td>
<td>3.5</td>
</tr>
<tr>
<td>Affiliation</td>
<td>247</td>
<td>7025</td>
<td>.7</td>
</tr>
</tbody>
</table>
### Table 3.5. Comparison of Planning Styles with Self

**Reported Skill Levels: ESP Scores (df=3, 57; n=61)**

<table>
<thead>
<tr>
<th>Skill Variable</th>
<th>Sums of Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td>Within</td>
<td></td>
</tr>
<tr>
<td><strong>Interpersonal</strong></td>
<td>3967</td>
<td>10067</td>
<td>7.49</td>
</tr>
<tr>
<td>Leadership</td>
<td>605</td>
<td>1841</td>
<td>6.24</td>
</tr>
<tr>
<td>Relationship</td>
<td>330</td>
<td>1651</td>
<td>3.8</td>
</tr>
<tr>
<td>Helping &amp; Del.</td>
<td>496</td>
<td>1510</td>
<td>6.25</td>
</tr>
<tr>
<td>Information Mgt.</td>
<td>1380</td>
<td>7771</td>
<td>3.37</td>
</tr>
<tr>
<td>Adapting</td>
<td>69</td>
<td>1041</td>
<td>4.9</td>
</tr>
<tr>
<td>Gathering Info.</td>
<td>198</td>
<td>1250</td>
<td>3.01</td>
</tr>
<tr>
<td>Info. Analysis</td>
<td>114</td>
<td>1862</td>
<td>1.16</td>
</tr>
<tr>
<td><strong>Analytical</strong></td>
<td>465</td>
<td>12714</td>
<td>.70</td>
</tr>
<tr>
<td>Planning</td>
<td>114</td>
<td>1539</td>
<td>1.41</td>
</tr>
<tr>
<td>Quant. Analysis</td>
<td>65</td>
<td>2082</td>
<td>.59</td>
</tr>
<tr>
<td>Technology Mgt.</td>
<td>79</td>
<td>2210</td>
<td>.68</td>
</tr>
<tr>
<td><strong>Action</strong></td>
<td>1409</td>
<td>8848</td>
<td>3.03</td>
</tr>
<tr>
<td>Goal Setting &amp;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision Making</td>
<td>156</td>
<td>1573</td>
<td>1.88</td>
</tr>
<tr>
<td>Taking Action</td>
<td>60</td>
<td>1361</td>
<td>.84</td>
</tr>
<tr>
<td>Entrepreneurial</td>
<td>334</td>
<td>1388</td>
<td>4.57</td>
</tr>
</tbody>
</table>
### Table 3.6. Comparison of Planning Styles with Learning

#### Style Variables: LSI Scores (df=3, 57; n=61)

<table>
<thead>
<tr>
<th>Learning Style Var.</th>
<th>Sums of Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td>Within</td>
<td></td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>17</td>
<td>483</td>
<td>.71</td>
</tr>
<tr>
<td>Reflective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observation</td>
<td>72</td>
<td>572</td>
<td>2.39</td>
</tr>
<tr>
<td>Abstract</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conceptualization</td>
<td>20</td>
<td>512</td>
<td>.76</td>
</tr>
<tr>
<td>Active</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimentation</td>
<td>32</td>
<td>499</td>
<td>2.39</td>
</tr>
<tr>
<td>Abstract Conc.-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete Exp.</td>
<td>331</td>
<td>1618</td>
<td>.39</td>
</tr>
<tr>
<td>Active Exp.-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective Obs.</td>
<td>201</td>
<td>1647</td>
<td>2.31</td>
</tr>
</tbody>
</table>
**Chart 3.1. Study 1 Duncan Procedure Results:**

Comparison of Planning Styles with Motive, Skill and Learning Style Means*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Significant Relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for Achievement</td>
<td>D, G &gt; A</td>
</tr>
<tr>
<td>Need for Power</td>
<td>D, R &gt; G</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>D &gt; G, A, R</td>
</tr>
<tr>
<td>Leadership Skills</td>
<td>D &gt; G, A, R</td>
</tr>
<tr>
<td>Relationship Skills</td>
<td>D &gt; G, A, R</td>
</tr>
<tr>
<td>Helping &amp; Delegating Skills</td>
<td>D &gt; G, A, R</td>
</tr>
<tr>
<td>Adapting Skills</td>
<td>D &gt; G, A, R</td>
</tr>
<tr>
<td>Information Gathering Skills</td>
<td>D &gt; G, R</td>
</tr>
<tr>
<td>Setting &amp; Managing to Goals</td>
<td>D &gt; G, R</td>
</tr>
<tr>
<td>Entrepreneurial Skills</td>
<td>D &gt; G, A, R</td>
</tr>
<tr>
<td>Information Management Skills</td>
<td>D &gt; G, R</td>
</tr>
<tr>
<td>Action Skills</td>
<td>D &gt; G, R</td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>G, A, R &gt; D</td>
</tr>
</tbody>
</table>

Active Experimentation—

Reflective Observation Axis            D > G, A, R

**Key:**

D=Directional Style  
G=Goal Oriented Style  
A=Action Oriented Style  
R=Reflective Style

* p<=.05
Of the three expected relationships between Directional planning and study variables, one hypothesis was partially confirmed and two received full confirmation. As illustrated in Chart 3.2, Directional planning was characterized by Need for Achievement to a higher degree than Action Oriented planning, as expected. However, Directional planning was not significantly higher in Need for Achievement than Reflective planning.

As expected, Directional planning was characterized by Action Quadrant scores to a higher degree than either Goal Oriented or Reflective planning. Also as expected, Directional planning was characterized by Information Management Skills to a higher degree than Goal Oriented or Reflective planning.

Of the four hypotheses relating Goal Oriented planning to study variables, two were partially supported and two were disproved (see chart 3.2). As predicted, Goal Oriented planning was characterized by Need for Achievement to a higher degree than Action Oriented planning. However, there was no significant difference between the Goal Oriented and Reflective planning styles on Need for Achievement. Partial
support was found for the relationship between Goal Oriented planning and Action Quadrant scores: Goal Oriented planning was significantly lower on Action Quadrant scores than Directional planning, but not lower on this variable than Reflective planning.

Hypotheses linking Goal Oriented planning to Analytical Skills and Abstract Conceptualization were disproved.

Of the four hypotheses relating Action Oriented planning to study variables, only one was confirmed (see Chart 3.2). As expected, Action Oriented planning was characterized by Need for Achievement to a lesser degree than Directional or Goal Oriented planning. No relationships were found to exist between Action Oriented planning and Action Quadrant scores, Interpersonal Skill scores or Need for Power scores.

Of the three hypotheses linking Reflective planning to study variables, two were partially confirmed and one was disproved. Reflective planning was characterized by Action Quadrant scores to a lesser degree than Directional planning. There was no significant differences between the Reflective and Action Oriented planning styles on Action Quadrant scores. Reflective planning was characterized by
Reflective Observation to a higher degree than Directional planning, but was not significantly higher on this variable than Action Oriented planning. Contrary to expectation, Reflective planning was not significantly lower on Need for Achievement than Directional or Goal Oriented planning.

A number of unexpected relationships were found to exist between planning styles and motive, skill and learning style variables. Interestingly, all of these relationships except one involved characteristics of Directional planning. These results are illustrated in Chart 3.2 and 3.3, and analysis of variance results are presented in Tables 3.4, 3.5, and 3.6.

Directional and Reflective planning were found to be characterized by Need for Power to a higher degree than Goal Oriented Planning. Directional planning was also found to be characterized by Leadership, Relationship, and Helping & Delegating Skills to a higher degree than all other styles. And, Directional planning was higher than Goal Oriented and Reflective planning on Information Management and Goal Setting &
Decision Making Skills. Finally, Directional planning was found to be characterized by Active Experimentation-Reflective Observation to a higher degree than all other styles.
## Chart 3.2 Summary of Hypotheses, Results and Outcomes (n=61)

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Result</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Directional Planning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1a Need for Achievement: D&gt;A,R</td>
<td>D,G&gt;A</td>
<td>Partial</td>
</tr>
<tr>
<td>1b Action Quadrant: D&gt;G,R</td>
<td>D&gt;G,R</td>
<td>Confirmed</td>
</tr>
<tr>
<td>1c Information Mgmt. Skills: D&gt;A,R</td>
<td>D&gt;G,R</td>
<td>Confirmed</td>
</tr>
<tr>
<td><strong>Goal Oriented Planning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2a Need for Achievement: G&gt;A,R</td>
<td>D,G&gt;A</td>
<td>Partial</td>
</tr>
<tr>
<td>2b Action Quadrant: G&lt;D,A</td>
<td>G&lt;D</td>
<td>Partial</td>
</tr>
<tr>
<td>2c Analytical Skills: G&gt;A,R</td>
<td>ns</td>
<td>Disproved</td>
</tr>
<tr>
<td>2d Abstract Conceptualization: G&gt;A,R</td>
<td>ns</td>
<td>Disproved</td>
</tr>
<tr>
<td><strong>Action Oriented Planning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3a Need for Achievement: A&lt;D,G</td>
<td>A&lt;D,G</td>
<td>Confirmed</td>
</tr>
<tr>
<td>3b Action Quadrant: A&gt;G,R</td>
<td>D&gt;G,R</td>
<td>Disproved</td>
</tr>
<tr>
<td>3c Interpersonal Skills: A&gt;G,R</td>
<td>D&gt;G,A,R</td>
<td>Disproved</td>
</tr>
<tr>
<td>3d Need for Power: A&gt;G,R</td>
<td>D,R&gt;G</td>
<td>Disproved</td>
</tr>
<tr>
<td><strong>Reflective Planning</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4a Need for Achievement: R&lt;D,G</td>
<td>A&lt;G,D</td>
<td>Disproved</td>
</tr>
<tr>
<td>4b Action Quadrant: R&lt;D,A</td>
<td>R,G&lt;D</td>
<td>Partial</td>
</tr>
<tr>
<td>4c Reflective Observation: R&gt;D,A</td>
<td>R,A,G&gt;D</td>
<td>Partial</td>
</tr>
</tbody>
</table>

D=Directional Planning Style  \( \quad \) R=Reflective Planning Style
G=Goal Oriented Planning Style \( \quad \) A=Action Oriented Planning Style
ns: No significant relationships
### Chart 3.3

**Other Significant Relationships Between Planning Styles and Motive, Skill and Learning Style Variables (n=61)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Significant Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for Power</td>
<td>D,R&gt;G</td>
</tr>
<tr>
<td>Leadership Skills</td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td>Relationship Skills</td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td>Helping and Delegating Skills</td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td>Adapting Skills</td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td>Information Gathering Skills</td>
<td>D&gt;G,R</td>
</tr>
<tr>
<td>Goal Setting and Decision Making Skills</td>
<td>D&gt;G,R</td>
</tr>
<tr>
<td>Entrepreneurial Skills</td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td>Active Experimentation - Reflective</td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td>Observation Axis</td>
<td></td>
</tr>
</tbody>
</table>

D=Directional Planning Style  
R=Reflective Planning Style  
G=Goal Oriented Planning Style  
A=Action Oriented Planning Style
Discussion

The variables identified in this study which relate to need for achievement and/or efficacy were proven to be instrumental in assigning individuals to one of four planning styles. These planning styles seem to relate differentially to motives, perceived skill levels and learning styles, and appear to represent four distinct ways of planning for the future.

Several of the hypothesized relationships between planning styles and motives, skills and learning styles were confirmed, as can be seen in Chart 3.2. Also, several unexpected but interesting relationships were found to exist between planning styles and study variables (see Chart 3.3). Viewed as a whole these results suggest that there may be individual differences which affect how people plan for the future, that some of these differences relate to a person's need for achievement and/or sense of efficacy, and that individual differences in planning might be explained in terms of planning styles.

Both statistical and qualitative data suggest that Directional planners are efficacious and that they
engage in achievement oriented behaviors as well. This style is particularly interesting because of the many positive relationships to motives, skills and learning styles. The large amount of information about this style distinguishes it from the others quite clearly.

Goal Oriented planners appear to follow a straight and narrow path to goal attainment. They demonstrate typical achievement oriented thoughts and behaviors, and their planning processes seem to be highly goal directed.

Action Oriented planning seems to be distinguished by high levels of energy and activity and limited attention paid to goal oriented activities. Both qualitative and statistical data support the notion that this style is not characterized by need for achievement, and Action Oriented planners do not engage in behaviors that lead to attainment of a specific goal.

A concern related to this style is that while qualitative data suggest that these people are highly efficacious, statistical tests do not support this notion. The expected relationship between Action Oriented planning and efficacy (as measured by the Action Quadrant score) was not supported. One
explanation for this is that the small and uneven cell sizes in this study could have resulted in Type II errors, masking true relationships. Another explanation for the lack of support for this hypothesis could be that the method of assigning planning style was inaccurate, and efficacy was not correctly measured via the Balance code score.

The Reflective planning style poses an interesting question. Qualitative and statistical data support the notion that this style is relatively low in efficacy, and yet Reflective planners are high in the need for power. One explanation for this result could be related to the sample. This group was comprised of 50% foreign students, who had for the most arrived in the country just prior to the orientation session. It would not be surprising for these people to be feeling somewhat unsure of themselves, cautious, and generally ineffectual. Given the situation, these people may have been concerned with their lack of power, which could translate into high Need for Power scores on the TAT.
Despite possible methodological problems, the results of the study were encouraging. Each of the four styles seemed to represent a different way of planning for the future, as discussed below.

**Directional Planning**

Directional planning is characterized by a high need for achievement and a high tendency to engage in action. This group balances career related activities with others they value. They identify a path to follow toward a goal, but are moderately flexible. People in this group tend to be aware of opportunities and obstacles and are able to articulate an action plan to capitalize on the environment. In addition, people with this planning style perceive themselves to be moderately responsible for attaining their goals.

In relationship to others, Directional planners have a high need for power or prestige, and they perceive themselves to be highly skilled in interpersonal relationships. They also see themselves as skillful information processors, but are less likely to prefer reflection as opposed to engaging actively in learning.
Analysis of questionnaire responses indicated that directional planners are characterized by the tendency to integrate their past experiences with the current situation and with future aspirations as well. Students in the study seemed to have highly teleological yet flexible approaches to the future. These students seemed to have a clear underlying purpose that directed their planning efforts, and they seemed to be keenly aware of and responsive to the environment. The planning processes of this group show marked resemblance to McCaskey’s (1975) conceptualization of a planning style based on direction and domain.

The most distinguishing feature of this group is the sense of underlying purpose and direction. While specific goals were mentioned, they were clearly part of a larger plan. Choices such as those involving more immediate goals seemed to be made with this larger plan in mind. The plan seemed to have developed as a result of past experiences, commitment to certain beliefs, and an understanding of personal needs and environmental opportunities. When writing of her future in graduate school, one student said, "I believe that it [the plan] is succinct and within my general
area of thinking". This interview suggested an underlying purpose based on a value of continuing personal and professional growth. Other interviews also hinted at underlying guiding principles, such as life long learning and personal development. The following statement exemplifies this orientation:

I think this plan is a very good one, but will only be successful if I maintain the perspective of what I'd like to do with my life, and insure that my activities, courses, etc. are commensurate with these goals.

In short, Directional planners seem to have a very clear sense of what is important to them, and how to set immediate goals which are in line with the larger, overarching goals. Furthermore, they seem to be able to integrate understanding of their own needs with a clear understanding of the environment and how it can affect them.

Directional planners appear to be keenly aware of both the resources and the limitations of the environment. They articulate a clear and seemingly realistic picture of the current situation, and are adept at using the environment to help them attain certain specific goals within the general domain or
direction they have outlined. It was clear in the questionnaire responses that the students had analyzed the environment, and that they recognized opportunities for developing aspects of themselves that would increase the likelihood of ultimate success. For example, a student interested in a less traditional field of business said, "I will make a concerted effort to use the available resources to insure my exposure to issues that are specific to nonprofit organizations". This student had clearly assessed the situation and determined that in order for her to continue on her chosen path she must make an extra effort to get the training she felt she needed.

Other students in this group also indicated that they had assessed the environment and planned to maximize exposure to those aspects of it which were in line with the their values and principles. One of these people said,

I hope to learn a lot more than just academics. I plan on being able to develop tremendously as an individual, as I think the environment is ideal.

Another student was particularly concerned with learning skills that would enhance professional
credibility, and planned to "...take advantage of all of the extra help available to me..."

The recognition that help might be necessary is in fact a distinguishing feature of Directional planning. Interestingly, Directional planners see not only what the environment can provide them in the way of opportunities, but also how it might hinder their attainment of certain specific goals. Directional planners seem to recognize that they are not omnipotent, can not control everything, and may have to change specific plans. On the other hand, both the general direction as well as the domain within which activities may occur remain constant.

McCaskey's (1975) treatise on planning inspired the current understanding of the importance of domain and direction for this style of planning. He presented this style of planning as characterized by an emphasis on individual directions and individual outlines of domain within which to proceed. The direction is actually determined by a keen understanding of what is satisfying and important to the individual. Once this direction is defined goals may also be articulated, but they are clearly not the focal point of the planning effort. "Instead of specifying concrete, measurable
goals, the planners work more from who they are and what they like to do" (McCaskey, 1975, p.283).

McCaskey also noted that individuals who engage in this style of planning are sensitive to their environments. He stated that these people recognize that "as decisions are made, some possibilities are diminished, others enhanced" (1975, p.285). Taking McCaskey's insights one step further, the data seem to indicate that individuals in this group are characterized by intrinsic motivation on the level of domain and directional choices, yet are open to extrinsic motivation and responsive to an external locus of control when necessary.

**Goal Oriented Planning**

Goal Oriented planning is characterized by a high need for achievement and a relatively low tendency to engage in action. People with this planning style engage in behaviors that are likely to insure goal attainment, most notable of which is a focus on specific, attainable goals. When articulating a goal, Goal Oriented planners employ a high degree of clarity and cogency, and the outline of the future involves sequential steps toward a very well defined end.
In relationship to others, Goal oriented planners seem to have a low need for power, or prestige. There is a low assessment of their interpersonal skills, though they report significantly higher levels of the Skill "Working as a Member of a Team". They also see themselves as moderately skilled in the area of information processing.

Information processing is an example of a positive activity that enables Goal Oriented planners to progress toward a goal. They are able to consider the available data related to their plans, and to put this information to use. Likewise, all activities, even those which do not relate directly to achievement of the goal, are considered in utilitarian terms. They are considered forums for gaining either experience or knowledge which will aid in successful goal attainment.

Analysis of the questionnaires in this group lent insight into the Goal Oriented approach to planning. It seems that Goal Oriented planners in this study were primarily concerned with goal specificity, attainability, and activities that would enhance chances of success. The goals were clearly visualized as a series of definite milestones in a process leading to completion of a plan. The specific outline of the
future involved sequential goals, with each planned action being an incremental step toward a very well defined, specific end.

The end goal was not, however, placed far in the distant future. Rather, the ultimate goals as stated in the interviews were generally visualized as attainable within a two or three year period. A student typified this position when she said: "Upon graduation in May 1989, I will be ready to significantly contribute to an institution as a financial analyst." Beyond mention of graduation and a job, this student's plan contained no reference to the far distant future.

The question of attainability within a reasonable time period was certainly of paramount importance in the interviews with Goal Oriented planners. These individuals had outlined courses of action which they thought would insure the attainment of their goals. They felt a sense of personal responsibility for achieving the goals and had analyzed their present assets in terms of how to build on them to further insure success. One student wrote, "I have been able to completely clear the upcoming year of all extraneous distractions or commitments so barring any unusual
circumstance I should have no major obstacles". Another student spoke of her natural shyness as a possible barrier to reaching her goal, and subsequently outlined a plan to join groups and clubs in order to overcome it.

While overcoming obstacles is seen as necessary, Goal Oriented planners are predominantly concerned with positive activities that will enable them to acquire skills that will help them attain their goals. Even socializing and recreation are seen as purposeful activities or opportunities to advance toward the goal. This is illustrated by the individual who said, "I also hope to enjoy concerts and art while in Cleveland in an attempt to make myself as interesting and well rounded as possible." Another student said, "I hope to participate actively in all aspects of college life that I feel are appropriate and feasible in light of my goals."

In summary, the Goal Oriented planner outlines a very clear path of action leading to a specific, attainable outcome. Her primary concern is to take full advantage of the present situation and to engage in actions which seem appropriate and which help to further her progress on a clearly visualized path. It
is not difficult to create a profile of this type of planner: she seems to have mastered the elements of the goal setting process which research has identified as critical to successful goal attainment.

**Action Oriented Planning**

Action Oriented planning is characterized by relatively low need for achievement and a tendency to be very active. Action Oriented planners outline many activities both related and unrelated to the goal, and subgoals tend to be absent from the planning process. Often, people in this group do not recognize environmental opportunities or obstacles and see themselves as solely responsible for their actions.

In relationship to others, people in this group have a higher need for power and the lowest need for achievement. They see themselves as skilled in activities involving technology, as well as being able to act when under pressure.

The most distinctive feature apparent in the questionnaire responses of the Action Oriented individuals was their total involvement in action. These students seemed to be committed to completely and totally experiencing life. Interests were many and
varied: one student epitomized this when she listed interests in "marketing, entrepreneurial studies, finance, accounting, bookkeeping, school projects, and other activities". Others also mentioned commitment to learning in areas not normally included in an MBA curriculum such as "German and Chinese", research in religious studies, and law.

A striking feature of the questionnaires was the way people expressed their commitment to activities. Not only did Action Oriented planners express interest in a wide variety of areas, they also stated firm commitment to active involvement in those areas. The verbs they used are indicative of their commitment to action: I will, I plan, I know.

Furthermore, Action Oriented planners in this study were very definitive, even reactionary, about their rights to pursue interests outside the realm of stated objectives. The clearest example of this was their commitment to recreational and social activities. Action Oriented planners did not seem to acknowledge that these outside interests might interfere with progress toward goal attainment. A student wrote,
First, I do not plan to devote myself only to my studies. A person who becomes committed to the books only is not only cheating themselves, but also any one they work or interact with in the future. I plan to continue my extracurricular activities to their fullest without any interference to my academic performance.

Like this student, others in this group seemed to either justify their commitment to outside interests, or were trying to prove that these interests were legitimate and would not interfere with goal attainment.

Although Action Oriented planners are committed to engaging in many activities unrelated to their stated goals, they do indicate a desire to attain a goal or a set of goals. However, goals are not stated clearly, nor are current activities related to the desired future state. Rather, all individuals in this group mentioned vague future goals such as "...become a better manager" or "feel comfortable and confident in real world situations", and none of the students articulated a clear relationship between what they were doing in the present and the goals they were setting. In short, the Action Oriented planners in this study did not seem to see linkages between today and
tomorrow, and were in effect putting off the process of identifying a clear path to follow. One student wrote,

Any given period in one’s life is a stepping stone to the next, so I will be trying to arrange and establish some sort of plan to incorporate my studies and learning into a productive and stimulating future".

In this example, the nature and characteristics of the future are not specified. In fact, the relationship between this student’s present activities and vague future is not specified either.

Current activities were definitely the focus of these interviews, and while Action Oriented planners in this study seemed to have a sense that they needed to acquire skills for the future, they were not explicit about how the skills might be applied. The future was alluded to in rather indefinite, dreamy terms, and was not clearly articulated.

Action Oriented planners do not seem to envision a clear future goal state, and are not necessarily involved in activities that will help them attain that goal. Yet, they are keenly aware of their present situations, and are able to outline actions that will enable them to overcome some of the obstacles they
expect to encounter in the immediate future. Action Oriented planners anticipate possible problem areas for the short term goal, and they identify possible solutions. One student anticipated having to get used to living without a lack of normal income, "...but with proper budgeting it will work". Other students had applied for GSL’s or merit scholarships to overcome possible financial obstacles.

Probably the most noteworthy characteristic of Action Oriented planners regarding possible obstacles is their refusal to admit that anything can stand in the way of their wishes. They see absolutely no reason why they should not follow their inclinations. They also readily accept personal responsibility for identifying and overcoming anything that gets in their way. One student stated this position most eloquently:

The real obstacle to any goal is mainly one’s self. Aside from financial ruin, I foresee no reason why I cannot achieve my goals as I have set them. It is up to the individual to overcome barriers and difficulties. This is, after all, what separates those who will lead, and those who will follow. These barriers may take on many shapes, forms, and sizes, but none can not be overcome.
This position is expressed by all interviewees in this group. Some even went further and adopted a cavalier attitude toward possible barriers. One student said that no hurdle is too high, and even unexpected events like "Marriage" or "Quintuplets... will only cause the plan to be adjusted for the better".

In summary, Action Oriented planners seem to have a very optimistic view of the future, but are most concerned with maximizing the benefits of their present situations. They see the environment as a rich resource, to be enjoyed and exploited to the fullest. They see themselves as in total control of their lives: nothing can stop them. Finally, Action Oriented planners do seem to have a future orientation, but clear goals or even a clear direction are not articulated.

Reflective Planning

Reflective planning is characterized by relatively low achievement motivation and a low orientation toward action. People in this group set general goals, do not outline specific plans or subgoals directed toward goal attainment, and seem to be fairly flexible. Reflective
planners do not tend to capitalize on opportunities and obstacles, and involvement in activities is relatively limited. Most importantly, Reflective planners recognize that other people and the environment are powerful determinants of fate.

In comparison to others, people in this group have a strong tendency to be reflective. They have a fairly extended time frame of reference, and see into the future further than groups who are high in action orientation. They also have a high need for power and prestige. The higher need for power is evidenced in this group's response to activity involvement: although they tend to engage in relatively few activities, a concern for other people's opinions of the activities is often mentioned.

In contrast to a relatively low tendency to engage in activities and capitalize on environmental factors, Reflective planners scored significantly higher on the ESP variable "Seeking and Exploiting Opportunities". This may be due to the fact that individuals with this style seem to be quite aware of the environment, and reflect upon how it might affect them. However, they seem reluctant to convert their thoughts into actions.
The most notable characteristic of this planning style is the tendency to rely on others for guidance in identifying and attaining goals. Additionally, there seems to be a high level of concern for familial and community responsibilities, to the extent that these responsibilities even determine the goal. This style is also characterized by an optimistic attitude regarding the future: things will turn out for the best, no matter what.

In support of this description the questionnaire responses suggested that Reflective planners have an external locus of control. They spoke of obligation to family and God and outlined the expectations of others as critical factors in their lives both present and future. The emphasis on forces outside the self as determinants of fate was quite marked; in fact, it seems clear that these people placed far more faith in the external environment than in themselves when considering goal attainment.

The questionnaire responses are colored by an "I should" attitude, and it is apparent that the "shoulds" originate outside the individual. One person wrote, "...every student who is seriously interested in the field of accounting should start out in public
accounting..." Another student stated that his first priority was to get good grades, and thereby live up to his parents' expectations. When learning or goal attainment was mentioned they were not portrayed as personal desires or successes, but as a means to obtain favorable evaluation from others.

Along the same lines, Reflective planners seem to view the environment as all powerful: it is both the source of success or failure. They see their roles in the process as relatively passive. One student, concerned about his tendency to procrastinate, saw the solution to his problem located in the environment, not within himself. Another student wrote of possible obstacles in his path as if he had no control over them.

In summary, Reflective planners seem to be most strongly characterized by an external locus of control as well as an external locus of evaluation. For this group, both the goals and the means to attain them are determined by someone other than the person himself. These people seem to want to plan do the right thing, but exactly what that right thing is, is defined by other people, institutions, or social expectations in general.
Summary

This study suggests that there may be individual differences in how people think about the future and plan, and that these differences may be conceptualized as planning styles. Both qualitative and statistical data indicate that the four styles identified are characterized by varying degrees of need for achievement and efficacy, although the relationships are not as clear or as exclusive as had been expected.

The study was exploratory, and therefore did not address a number of personality and behavioral variables that might affect the process of planning. In the following two chapters, studies will be presented that were designed to further the construct validation of planning styles, and to address the issue of whether planning style is predictive of behavior.
Chapter Four

Study 2: Construct Validation of Planning Styles

Study 2 was designed to expand the understanding of individual differences in planning through further construct validation of planning styles. The first objective of the study was to determine whether the method of assigning planning styles could be replicated. The second objective of the study was to test and explore the relationships between planning styles and variables related to personality, interpersonal style and learning style. Many of these variables are related to the need for achievement, efficacy or vision. Other variables were included in the study as well because they were thought to be reflective of personal attributes that would affect the planning process.

The general assumption underlying this study was that planning styles would be differentially related to personality types, values and interpersonal styles. For example, it was thought that the achievement motivated, Goal Oriented planner would be likely to have a personality style that emphasized logical,
rational thinking and behaving. Or, Directional planners might emphasize values related to power and political impact, due to their high levels of efficacy.

Two basic research questions were addressed by this study:

1. Can subjects be assigned a planning style based on the scoring system devised in Study 1?
2. Are planning styles related differentially to personality types, values, and/or interpersonal styles?
Method

Students in a small Eastern university were asked to complete the "Thinking About the Future" Questionnaire and to take a battery of tests during the Spring Semester, 1990. The tests measured personality types, value orientations, interpersonal style and learning style variables.

The Planning Code (see Appendix I) was applied to questionnaires, and subjects were assigned planning styles based on their scores on the following variables: Opportunities/Obstacles, Balance, Efficacy, Subgoals, and Flexibility. Planning styles were analyzed to determine whether they accounted for variance in value, personality type, interpersonal style or learning style variables.

Sample

96 undergraduate students at a small public university participated in the study as part of Personnel and Organizational Behavior courses during the Spring, 1990 semester. The sample was predominantly Caucasian, with blacks and other minorities representing only 3%. 58% of the students
were male, 42% female, and the median age was 21. The students were enrolled full time, and most were expecting to graduate within 2 years.

**Assessment Instruments**

The students were administered eight tests, which were given as part of the Career Assessment and Counseling sections of the courses. Five of these tests were used in this study.

The first test, a questionnaire entitled "Thinking About the Future" (Boyatzis, 1987) was administered in class prior to administration of any other tests or discussion of the subject material. The Learning Style Inventory (Kolb, 1984) and the FIRO-B (Schutz, 1958; Schutz & Wood, 1982) were also administered in class under direction of the professor. The Study of Values (Allport, Vernon, & Lindzey, 1970) and the Self Directed Search (Holland, 1985) were part of a career assessment packet that the students were required to complete. The latter two instruments were completed by the students at home, after receiving instructions from the professor on how to take and score the tests.

"Thinking About the Future" is a modified version of the questionnaire used in Study 1. The following
six questions were responded to in writing over a period of 30 minutes:

1. What do you plan to do in the foreseeable future?
2. Why do you plan on doing these things?
3. How certain are you of your plan?
4. What may get in your way as you work on your plan?
5. What sources of help or assistance have you considered?
6. On a scale of 1 to 7, how satisfied are you with your plan? (1=not at all, 7=completely).

The modifications in the questionnaire were slight but important. First, the time frame "two years" evident in the original version of the questionnaire was eliminated and "foreseeable future" was substituted. This modification was instituted because by specifying a time frame, students were not free to express their natural inclinations about how far into the future they plan.

The next modification involved the original question 3 which was "How do you feel about your plan?" It was revised to read "How satisfied are you with your plan, on a 1 to 7 scale?" and became the current
question 6. In Study 1, the question elicited simplistic and generally positive responses that did little to elucidate the relationship of the code variable Affect to the process of planning. It was thought that because the original question was asked in such a direct manner, people may have felt compelled to answer the question positively. It was hoped that the more impersonal Likert scale methodology, and the change in from "feeling" to "level of satisfaction" might enable the students to answer more honestly.

Finally, the current question 3, "How certain are you of your plan?" was added. This question was added in an attempt to elicit responses related to the concept of efficacy. Both the literature on the subject and the results of Study 1 indicate that efficacy may be an important factor in the planning process. It was hoped that this question would allow for more direct inquiry into the nature of the variable.

The version of the Learning Style Inventory (Kolb, 1984, 1989) used in this study was the same as that utilized in Study 1. The respondents ranked words which characterize how they learn, with resultant scores indicating preferences for learning through
Abstract Conceptualization (AC), Concrete Experience (CE), Active Experimentation (AE) or Reflective Observation (RO). By subtracting CE from AC and RO from AE, scores that represent the axes of the learning style model were derived.

The FIRO-B (Schutz, 1958; Schutz & Wood, 1982) is a measure of interpersonal style which focuses on the extent to which a person wants and/or expresses Inclusion, Control, and Affection. The participant is asked to respond to a series of questions about social interactions. Responses to the questions are tallied by the participant, and the resultant sum indicate interpersonal styles and preferences.

The Self Directed Search (Holland, 1973; 1985; Osipow, 1968; Campbell, 1988; Daniels, 1989) is designed to guide high school students and adults in the career planning process. The SDS is a self administered, self scored measure of Holland’s six personality variables and corresponding occupational environments: Realistic; Investigative; Social; Conventional; Enterprising; and Artistic. Each of the personality types is measured on three scales: Activities, Competencies, and Occupations.
The 1985 version of the SDS used in this study is comprised of six sections. In the Occupational Daydreams section, a person is asked to identify up to eight occupations as especially interesting. In the Activities section, a person indicates like or dislike for eleven items that represent each of the six personality types. Similarly, in the Competencies section the participant indicates eleven activities for each of the six types that she performs well or poorly. In the Occupations section, eleven items for each of the six types are scored as interesting or uninteresting. There are also two seven point Self Estimate scales for each of the six types. All of the measures except Occupational Daydreams are used to compute the total scores for personality types.

In summary, the SDS yields scores on variables representing the six personality types, labelled Realistic, Investigative, Social, Conventional, Enterprising, and Artistic. Each of the scales is supported by subscales related to Activities, Competencies and Occupations.

The Allport, Vernon, Lindzey (AVL) Study of Values (Allport & Vernon, 1931; Allport, 1961, 1970) is a questionnaire that asks a respondent to indicate
preferences on 45 questions related to Theoretical, Economic, Aesthetic, Social, Political and Religious values. According to Allport (1961), Theoretical values indicates a dominant interest in truth and discovery. The predominant desire of an "ideal" theoretical person would be to discover and organize knowledge through empirical, rational, objective thought. Economic values are related to an interest in what is useful, utilitarian, and practical. The "ideal" economic person is very similar to the stereotype of the average businessman. Aesthetic values are those related to harmony, form, grace and symmetry. The "ideal" Aesthetic person is most concerned with the artistic side of life. Social values are related to the love of people. The "ideal" Social person is kind, sympathetic, and unselfish. Political values are related to power, in that the "ideal" Political person is concerned with having control and being able to influence others. Religious values center around the concept of unity. The "ideal" Religious person is concerned with understanding and creating the highest mental experience, either through active engagement with life or quiet contemplation.
Hypotheses

The hypotheses presented below were based on the suggested relationships between planning styles and the need for achievement and efficacy. They were developed in response to the results of the first study, which indicated differential levels of the need for achievement and efficacy in planning styles. Also, some of the hypotheses were based on extrapolations of the results of Study 1. For example, a planning style found to be characterized by the need for power might logically be expected to also be related to Political Values.

The hypothesized relationships between Directional planning and Study 2 variables were developed in response to Study 1 results. According to those results, people with this style of planning are highly efficacious and are risk takers. They consider themselves to be skilled interpersonally, and they want to have impact on others. These results suggest links with three of the current study variables: Political Values, Enterprising Personality Type, and Expressed Control.

The relationship between Directional planning and Political Values is expected based on the results of
Study 1 which indicate that the Directional Planner has a high need for power. Need for power is defined by McClelland (1985) as the concern for having impact, while Allport and Vernon (1931) describe the person who has Political Values as one who is primarily interested in power, and who desires direct expression of this value.

The relationship between Directional planning and the Enterprising Personality Type is expected due to the Directional Planner’s high level of efficacy, the tendency to engage in risk taking activities and perceived high level of interpersonal abilities. These characteristics correspond to Holland’s description of the Enterprising Personality Type (1973).

The relationship between Directional planning and the Expressed Control measure of the FIRO-B is expected due to the results of Study 1, indicating that Directional Planners have a high need for power. The Expressed Control measure of the FIRO-B indicates a desire to control other people within the context of interpersonal relationships (Schutz, 1958; Schutz & Wood, 1982).
**Hypothesis 1.a.** Directional planning was expected to be characterized by Political Values to a higher degree than Goal Oriented or Reflective planning.

**Hypothesis 1.b.** Directional planning was expected to be characterized by the Enterprising Personality Type to a higher degree than Goal Oriented or Reflective planning.

**Hypothesis 1.c.** Directional planning was expected to be characterized by Expressed Control to a higher degree than Goal Oriented planning.

The hypotheses relating Goal Oriented planning to Study 2 variables were based on results of Study 1, which suggest that the Goal Oriented planner is oriented toward achievement and focused on attaining a goal. This type of planner is also practical, logical, and somewhat inefficacious. These characteristics suggest links with three of the current study variables: Economic Values; Realistic Personality Type; and Wanted Control.

A relationship between Goal Oriented planning and Economic Values as defined by Allport (1961) is
expected because of the Goal Oriented planner’s practical approach to the future, as evidenced by high scores on the variables Opportunities/Obstacles and Subgoals in Study 1. Scores on these variables indicate a tendency to approach planning in a straightforward, energy efficient manner and to take practical advantage of situations as they arise. All of these tendencies are characteristic of a person who emphasizes Economic Values (Allport & Vernon, 1931).

The relationship between Goal Oriented planning and Holland’s Realistic Personality type is based on results of Study 1. These results suggest that the Goal Oriented planner is conforming, persistent, and practical. This person sets realistic goals and outlines a logical plan to attain them. Similarly, Holland (1973) describes the Realistic Type as one who is conforming, persistent, practical, and materialistic.

The relationship between Goal Oriented planning and the Wanted Control measure of the FIRO-B was expected due to the Goal Oriented planner’s relatively low scores on both the code variable Efficacy and the ESP Action Quadrant score in Study 1. These variables are indicative of a person’s tendency to take charge,
assume control and/or take risks rather than accept rules and regulations. When these scores are low, it could be inferred that the individual prefers others to be in control (Schutz, 1958; Schutz & Wood, 1982).

**Hypothesis 2.a.** Goal Oriented planning was expected to be characterized by Economic Values to a higher degree than Action Oriented or Reflective planning.

**Hypothesis 2.b.** Goal Oriented planning was expected to be characterized by the Realistic Personality Type to a higher degree than Action Oriented or Reflective planning.

**Hypothesis 2.c.** Goal Oriented planning was expected to be characterized by Wanted Control to a higher degree than Directional or Reflective planning.

The hypotheses relating Action Oriented planning to study variables were based on the results of Study 1 which indicate that this type of planner is efficacious and likely to engage in many activities. These results suggest a link with the Artistic Personality Type, and a tendency to learn through Concrete Experience.
The relationship between Action Oriented planning and the Artistic Personality Type is expected because Holland (1973) described this type as complicated, disorderly, impulsive and original. These are characteristics one might expect from a person who is efficacious, quite flexible, and is habitually involved in many diverse activities.

It is expected that Action Oriented planners will be characterized by a tendency to learn through Concrete Experience (Kolb, 1984). This relationship is expected due to the Action Oriented planner’s high involvement in activities (the Activity Level code score) and the relatively high level of the code variable Efficacy. Although this relationship was not supported by Study 1, it is proposed that the more homogeneous sample in Study 2 may allow the hypothesis to be confirmed.

**Hypothesis 3.a.** Action Oriented planning was expected to be characterized by the Artistic Personality Type to a higher degree than Goal Oriented or Reflective planning.
**Hypothesis 3.b.** Action Oriented planning was expected to be characterized by Concrete Experience to a higher degree than Goal Oriented or Reflective planning.

The hypotheses relating Reflective planning to Study 2 variables were developed in response to the results of Study 1, which suggest low efficacy. This result suggests a link with Religious Values. The second hypothesized relationship between this planning style and a study variable relates Reflective planning to Reflective Observation. In Study 1, this relationship was significant and would therefore be expected to be confirmed in this study as well.

It is expected that the Reflective Orientation will be related to Religious Values as defined by Allport (1961). This relationship is expected due to the Reflective planner's low scores on Efficacy, which could indicate an external orientation, and an external locus of control.

It is expected that the Reflective Orientation (Kolb, 1984) will be related to Reflective Observation, and that Reflective planners would score higher than Directional planners on this measure of preference for
learning through observation and reflection. This comparative relationship would support the one found in Study 1.

**Hypothesis 4.a.** It was expected that Reflective planning would be characterized by Religious Values to a higher degree than Directional or Action Oriented planning.

**Hypothesis 4.b.** It was expected that Reflective planning would be characterized by Reflective Observation to a higher degree than Directional planning.

**Design**

The 96 participants in the study were assigned to Directional, Goal Oriented, Action Oriented and Reflective Planning Styles using the scoring method devised in Study 1 (see Chapter 3, Table 3.2). Sixteen participants scoring high on the variables Activity Level and Opportunities/Obstacles and high on the intensity scale involving Efficacy, Subgoals and Flexibility were determined to have a Directional planning style. 36 participants were assigned to the
Goal Oriented planning style, based on high scores on Opportunities/Obstacles, low scores on Activity Level, and moderate scores on the intensity scale. 24 participants were assigned to the Action Oriented planning style, based on low Opportunities/Obstacles scores, high Activity Level scores and moderate scores on the intensity scale. 20 participants were assigned to the Reflective planning style based on low Activity Level scores, low Opportunities/Obstacles scores and low scores on the intensity scale. Table 4.1 presents the distribution of subjects by planning style.

Table 4.1. Distribution of Subjects by Planning Style

<table>
<thead>
<tr>
<th>Planning Style</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directional</td>
<td>16</td>
</tr>
<tr>
<td>Goal Oriented</td>
<td>36</td>
</tr>
<tr>
<td>Action Oriented</td>
<td>24</td>
</tr>
<tr>
<td>Reflective</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
</tr>
</tbody>
</table>

The distribution of participants among Planning Styles was similar to the distribution in Study 1, although there were proportionately fewer in the Goal
Oriented group, and slightly more in both the Action Oriented and Reflective groups. Examination of participants assigned to each style on demographic variables such as age, GPA, and gender yielded no significant differences between groups.

Analysis of variance was used to test the relationship between planning styles and variables yielded by the AVL Study of Values, the Self Directed Search, the Learning Style Inventory and the FIRO-B. The Duncan procedure was employed to determine which planning styles were significantly different at the .05 level. The Bartlett-Box F test was used to determine homogeneity of variance. If this statistic proved significant, t-tests were employed and t values using separate variance were examined.
Results

All hypotheses relating planning styles to Values and Interpersonal Styles were disproved, and no unexpected relationships were found to exist in this segment of the analysis. Hypotheses relating planning styles to Personality Types and Learning Styles were also disproved, although there were a number of unanticipated significant relationships (see Charts 4.2 and 4.3). Analysis of variance results are summarized in Tables 4.2, 4.3 and 4.4 and means and standard deviations are presented in Appendix III.

Although the hypotheses in this study were disproved, there were a number of unanticipated significant relationships between planning styles and Personality Type variables as well as Learning Style variables. These results, discussed below, are presented in Chart 4.1 which summarizes the Duncan procedure results.
Table 4.2. Comparison of Planning Styles with Values and Interpersonal Styles (df=3.84; n=88)

<table>
<thead>
<tr>
<th>Motive Variable</th>
<th>Sums of Squares</th>
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<th>p</th>
</tr>
</thead>
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<tr>
<td></td>
<td>Between</td>
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<td></td>
</tr>
<tr>
<td>Value</td>
<td></td>
<td></td>
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<tr>
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<td>Interpersonal Style</td>
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<td>Express Inclusion</td>
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<td>Express Control</td>
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</tbody>
</table>
It was expected that Directional planners would score high on the Enterprising scales of the Self Directed Search, indicating a resemblance to the Enterprising Type. This was not confirmed and was contradicted by significant main effects indicating that the Directional Orientation is characterized by higher scores on both the Investigative Total score and the Investigative Activities scores (F=4.71, p=.004; and F=5.02, p=.003, respectively). The Duncan Procedure indicated that Directional planners score significantly higher than Action or Goal Oriented planners on these measures (see Chart 4.1 for Duncan Procedure results). Similarly, the mean score for the Directional Orientation on the Investigative subscale Science Abilities was significantly higher than the mean scores of the Goal Oriented or Reflective groups (F=4.40, p=.006; Duncan p<=.05). While the main effect was not significant, the Duncan Procedure also indicated that Directional Orientation scores were significantly higher than Reflective Orientation scores on Investigative Competencies.
Table 4.3. Comparison of Planning Styles with Personality Types (df=3.82; n=86)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sums of Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td>Within</td>
<td></td>
</tr>
<tr>
<td>Realistic Type</td>
<td>217</td>
<td>8831</td>
<td>.67</td>
</tr>
<tr>
<td>Investigative Type</td>
<td>770</td>
<td>4469</td>
<td>4.71</td>
</tr>
<tr>
<td>Artistic Type</td>
<td>156</td>
<td>7719</td>
<td>.55</td>
</tr>
<tr>
<td>Social Type</td>
<td>327</td>
<td>6630</td>
<td>1.35</td>
</tr>
<tr>
<td>Enterprising Type</td>
<td>157</td>
<td>5713</td>
<td>.75</td>
</tr>
<tr>
<td>Conventional Type</td>
<td>47</td>
<td>9204</td>
<td>.14</td>
</tr>
</tbody>
</table>

Also, Directional planning was characterized to some extent by a similarity to the Social Type. Although the main effect was not significant (F=2.07, p=.11), the Duncan Procedure indicated that the Directional planner may be more likely to prefer Social Activities than either the Goal Oriented or Reflective planner (p<=.05).

Analysis of the Learning Style Inventory variables indicated that the Directional Orientation may be related to Abstract Conceptualization (F=3.31, p=.024)
Table 4.4. Comparison of Planning Styles with Learning Style Variables (df=3,87; n=91)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sums of Squares</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td></td>
<td>Within</td>
</tr>
<tr>
<td>Active</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimentation</td>
<td>497</td>
<td>4489</td>
<td>3.21</td>
</tr>
<tr>
<td>Reflective</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observation</td>
<td>227</td>
<td>3918</td>
<td>1.68</td>
</tr>
<tr>
<td>Abstract</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conceptualization</td>
<td>496</td>
<td>4346</td>
<td>3.32</td>
</tr>
<tr>
<td>Concrete</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience</td>
<td>107</td>
<td>2872</td>
<td>1.08</td>
</tr>
<tr>
<td>Abstract Conc.-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concrete Exp.</td>
<td>642</td>
<td>8578</td>
<td>2.17</td>
</tr>
<tr>
<td>Active Exp.-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective Obs.</td>
<td>447</td>
<td>11666</td>
<td>1.11</td>
</tr>
</tbody>
</table>

and the Abstract Conceptualization-Concrete Experience axis (t=2.76, p=.008). In both cases, results indicate that the Directional Orientation is significantly higher than the Goal Orientation on these variables.
Chart 4.1. *Study 2 Duncan Procedure Results:*

**Comparison of Planning Styles with Values, Personality Types, Interpersonal Styles and Learning Styles**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Significant Relationships*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigative Total</td>
<td>D, A &gt; G, R</td>
</tr>
<tr>
<td>Investigative Activities</td>
<td>D &gt; G, R</td>
</tr>
<tr>
<td></td>
<td>A &gt; R</td>
</tr>
<tr>
<td>Investigative Competencies</td>
<td>D, G &gt; R</td>
</tr>
<tr>
<td>Science Abilities</td>
<td>D &gt; G, R</td>
</tr>
<tr>
<td></td>
<td>A &gt; R</td>
</tr>
<tr>
<td>Social Abilities</td>
<td>D &gt; G, R</td>
</tr>
<tr>
<td>Enterprising Abilities</td>
<td>R &gt; A</td>
</tr>
<tr>
<td>Math Abilities</td>
<td>A &gt; R</td>
</tr>
<tr>
<td>Abstract Conceptualization</td>
<td>D, A &gt; G</td>
</tr>
<tr>
<td>Active Experimentation</td>
<td>G &gt; D, A, R</td>
</tr>
</tbody>
</table>

D=Directional Style            G=Goal Oriented Style
A=Action Oriented Style        R=Reflective Style
*  p <= .05
Hypotheses regarding the relationship between the Goal Orientation and Holland's Realistic Type were disproved. Likewise, the hypothesis relating the Goal Orientation to Reflective Observation as measured by the LSI was disproved, and in fact contradicted by significant main effects on the variable Active Experimentation (F=3.21, p=.027). As illustrated in Chart 4.1, the Duncan Procedure indicated that the Goal Orientation is significantly higher than all three other styles on Active Experimentation.

Hypotheses regarding the relationship between the Action Orientation and the Holland Artistic Type were not confirmed. In fact, the Action Orientation proved significantly more Investigative than the Goal or Reflective Orientations with respect to the total score (F=4.71, p=.004; Duncan p<.05), and significantly higher than the Goal Orientation on the Investigative Activities scale (F=5.02, p=.003; Duncan p<.05). And, although the main effect was only near significant, Action Oriented planners scored significantly higher on Investigative Competencies (F=2.57, p=.06; Duncan p<.05). Finally, on the Math Abilities scale, Action Oriented planners scored significantly higher than Reflective planners (F=2.92, p=.039; Duncan p<.05).
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Directional Planning</strong></td>
<td></td>
</tr>
<tr>
<td>1a Political Values:</td>
<td>D&gt;G,R</td>
</tr>
<tr>
<td>1b Enterprising Personality Type:</td>
<td>D&gt;G,R</td>
</tr>
<tr>
<td>1c Expressed Control:</td>
<td>D&gt;G</td>
</tr>
<tr>
<td><strong>Goal Oriented Planning</strong></td>
<td></td>
</tr>
<tr>
<td>2a Economic Values:</td>
<td>G&gt;A,R</td>
</tr>
<tr>
<td>2b Realistic Personality:</td>
<td>G&gt;A,R</td>
</tr>
<tr>
<td>2c Wanted Control:</td>
<td>G&gt;D,A</td>
</tr>
<tr>
<td><strong>Action Oriented Planning</strong></td>
<td></td>
</tr>
<tr>
<td>3a Artistic Personality:</td>
<td>A&gt;G,R</td>
</tr>
<tr>
<td>3b Concrete Experience:</td>
<td>A&gt;G,R</td>
</tr>
<tr>
<td><strong>Reflective Planning</strong></td>
<td></td>
</tr>
<tr>
<td>4a Religious Values:</td>
<td>R&lt;D,A</td>
</tr>
<tr>
<td>4b Reflective Observation:</td>
<td>R&gt;D</td>
</tr>
</tbody>
</table>

D=Directional Planning Style  
R=Reflective Planning Style  
G=Goal Oriented Planning Style  
A=Action Oriented Planning Style
Chart 4.3  Summary of Other Significant Relationships Between Planning Styles and Value, Personality Type, Interpersonal Style and Learning Style Variables (n=95)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Investigative Total</td>
<td>D&gt;A,G</td>
</tr>
<tr>
<td>2. Investigative Competencies</td>
<td>A,D&gt;R</td>
</tr>
<tr>
<td>3. Investigative Activities</td>
<td>A&gt;G</td>
</tr>
<tr>
<td>5. Math Abilities</td>
<td>A&gt;R</td>
</tr>
<tr>
<td>6. Enterprising Activities</td>
<td>R&gt;A</td>
</tr>
<tr>
<td>7. Enterprising Abilities</td>
<td>A,D&gt;R</td>
</tr>
<tr>
<td>8. Abstract Conceptualization</td>
<td>D,A&gt;G</td>
</tr>
<tr>
<td>9. Active Experimentation</td>
<td>G&gt;D,A,R</td>
</tr>
<tr>
<td>10. Abstract Conceptualization -</td>
<td></td>
</tr>
<tr>
<td>Concrete Experience</td>
<td>D&gt;G</td>
</tr>
</tbody>
</table>

D=Directional Planning Style   R=Reflective Planning Style
G=Goal Oriented Planning Style A=Action Oriented Planning Style
Another unexpected result involved the relationship of Action Oriented planning to learning style variables. While it was expected that Action Oriented planners would be characterized by a tendency to prefer Concrete Experience, they appear to prefer Abstract Conceptualization, at least more than do the Goal Oriented planners \( (F=3.31, p=.024; \text{ Duncan } p<.05). \)

Unexpectedly, analysis of variance indicated that Reflective planners are characterized by Enterprising Activities and Abilities. A t-test indicated that the Reflective Orientation is significantly higher than the Action Orientation on Enterprising Activities \( (t=-2.07, p=.046). \) While main effects are only near significant \( (F=2.39, p=.075), \) the Duncan Procedure indicated that Reflective Planners are also significantly higher than Action Oriented planners on Enterprising Abilities (see Chart 4.1). And, contrary to the proposed hypothesis, the Reflective Orientation is not characterized by Reflective Observation.
Discussion

This study indicates that there are no relationships between planning styles and values or interpersonal styles, and that there are not likely to be relationships between planning styles and learning styles. While there appear to be some links between planning styles and personality types, the relationships were not anticipated, and do not seem to support the model of discrete planning styles. There are a number of possible reasons for the results of this study. The simplest explanation is that planning styles are not related in a meaningful way to values, personality styles, interpersonal styles or learning styles. However, as the discussion below illuminates, there are some reasons to believe that the results of the study are deceptive, and that there may be some methodological problems in the study that account for the confusing results.

In considering the relationships between study variables and planning styles, it was first noted that in no cases were either Values or Interpersonal Style variables associated with planning styles. This could mean that a person's style of planning is not related
to his values of preferred way of interacting with people. While this explanation is plausible, examination of written data and audiotaped interviews indicates that some people, notably highly efficacious individuals with a strong sense of purpose, do indeed articulate firmly held values. These values tend to focus on power, influence and impact. Similarly, qualitative data suggest that this type of individual often takes charge in interpersonal situations. In short, while results of the statistical analysis indicate that values and interpersonal styles are not related to planning styles, qualitative data suggest that they are.

Another confusing result involved the relationships of learning style variables to planning styles. Hypothesized relationships were not supported, and the results of Study 1 were not replicated. Again, an obvious explanation is that Learning Styles are not at all related to planning styles. While this is a plausible explanation, the conceptual link between Learning Style and behaviors associated with decision making is strong (Kolb, 1984). Since the processes involved in planning for the future are similar to those used in problem solving, questions are left
unanswered as to why proposed relationships were not found to be true.

Some results linked Personality Types to planning styles, but the results were unanticipated, even contradictory to proposed hypotheses. Furthermore, results indicated that the planning styles were not discrete with respect to personality type. Certainly, one explanation for these confusing results might be that might be that planning styles are not exclusively related to Personality Types. This notion is supported by the result indicating that both Directional and Action Oriented planning were characterized by the Investigative Type. This of course draws into question the model of exclusive, discrete planning styles.

Another explanation for the results of this analysis is that the proposed relationships between personality types, need for achievement and efficacy do not exist, and therefore the personality variables are not related in a meaningful way to planning styles.

Certainly, the above discussion poses plausible explanations for the lack of confirmation of hypotheses in this study, and for the unanticipated and sometimes contradictory results. It is certainly possible that planning styles are not related to values, personality
types, interpersonal styles or learning styles. It is possible that planning styles are not exclusively related to personality types. And, it is possible that the instruments used in this study do not relate to the need for achievement or efficacy, thereby confounding the relationship of study variables to planning styles.

Despite these possible explanations, the sheer number of disproved hypotheses and unexpected results leads to examination and criticism of the methodology used to examine individual differences in planning. As suggested in the summary of the previous chapter, there were some concerns about the methodology employed in assigning planning styles. Given the results of the second study, this concern is magnified and leads to a question of whether the planning style model is a meaningful way of understanding individual differences in planning.

Examination of written and audiotaped data indicates that in some cases, people may have been wrongly assigned a planning style. For example, one person who was clearly purposeful, directed and efficacious, seemed to epitomize the Directional planner as originally envisioned. And yet, this person was assigned to the Action Oriented planning style only
because she did not score high on the planning code variable Opportunities/Obstacles. This indicates that one mistake in coding or the absence of only one behavior could cause assignment to a style that does not necessarily reflect the planning process of the individual.

Another and perhaps more serious problem with the methodology relates to the major criterion required for assignment to a style (see Table 3.2). While the code variable Opportunities/Obstacles is related strongly to need for achievement, and Activity Level is related strongly to the Action Quadrant of the ESP, both are in essence second hand measures of the constructs need for achievement and efficacy. So, it is possible that errors in assignment are due to errors in assessing the need for achievement and/or efficacy. This would lead to weak relationships between planning styles and other measures thought related to need for achievement or efficacy.

A final concern raised by this study relates to the model of planning styles. Initially, it was thought that individual differences in planning might be best explained in terms of discrete styles, and that these styles would be indicative of relative levels of
the need for achievement and efficacy. Results of this study indicate that at least in terms of personality types and learning style variables, planning styles are not discrete: more than one style can be characterized a particular variable. Given this interpretation of the results of Study 2, it is possible that the model of four discrete planning styles is not a meaningful way to interpret individual differences in planning.
Summary

This study raises some serious questions and concerns about the nature of planning styles and about the notion of styles as a useful way of explaining individual differences in planning. In Study 2, hypotheses were not confirmed and unexpected results surfaced. A number of explanations could account for these results, including most obviously that planning styles are not related to values, personality types, interpersonal styles or learning styles. However, qualitative data contradicts this explanation, and conceptual links between planning processes and several of the study variables are quite clear.

Other explanations for the results of this study involve the methodology used to assign planning styles, and potential problems with the original model. It is possible that the scoring system used to assign planning styles led to inaccuracy due to either the rigidity of the system or inaccurate assessments of the need for achievement and/or efficacy. It is also possible that the original model, which called for discrete styles based on relative levels of need for achievement and efficacy, simply does not accurately
describe or explain individual differences in planning for the future.

The following chapter presents the third study of individual differences and styles of planning for the future. It was conducted concurrently with this study, and therefore could not be modified to reflect the concerns reported herein.
Chapter Five

Study 3: Predictive Validation of Planning Styles

This study was designed to explore possible relationships between planning styles and behavior. In particular, the study was designed to address the predictive capability of planning styles with respect to behavior during a full time MBA program, when seeking employment, and during the early phases of employment after graduation. The study was possible because at the time of data collection, two and one half years had passed since the original sample of entering MBA students had completed the "Thinking About the Future" questionnaire. Since that time, most of the students had competed their MBA programs and had accepted employment. Therefore, planning style data was available for all of the original sample, and they could provide information about their behavior during school, as they looked for a job, and at work. The specific research questions this study addressed were:

1. Is planning style predictive of behavior during a full time MBA program?
2. Is planning style predictive of behavior during the job search process?

3. Is planning style predictive of behavior at work?

Based on the results of Study 1, there were some general assumptions made about planning styles which affected the design of this study and the development of hypotheses. The first assumption was that planning styles high in need for achievement (Directional and Goal Oriented) could be expected to demonstrate behaviors associated with this motive.

A second assumption involved the relationship of efficacy to planning style. This characteristic, present in Directional and Action Oriented planning styles, was expected to be demonstrated through entrepreneurial, action oriented and/or goal management behaviors.

Assumptions were also made regarding the relative intensity of the code variables Efficacy, Subgoals, and Flexibility and their effects upon behavior. When intensity scale scores were high, as in the case of Directional planning, qualities relating to the three variables in the scale were expected to be present. When intensity scale scores were moderate, as in the
cases of Goal and Action Oriented planning, it was considered possible that only one or two of the variables would be influential in guiding actions or behavior. Finally, when the intensity scale score were low, as in the case of Reflective planning, it was expected that behaviors associated with low levels of the variables would be present.

Based on these assumptions, a study was designed to gather information about people's behavior at school and on the job and to compare that information with planning styles. It was expected that the study would clarify relationships between how people plan and how they act. It was also expected that the study would provide an opportunity to examine the model of planning styles, and to determine its strengths and weaknesses.
Method

The study was designed to collect data about people's behavior and attitudes during their MBA program, as they seek employment, and in the early tenure of the first job after graduation. Data were collected two ways. First, school records were examined with respect to behavior and outcomes during enrollment in the MBA program. Second, a questionnaire was administered verbally over the telephone and responses recorded in writing on a standardized form (see Appendix V.). The information from the questionnaire was coded numerically, and the results were compared statistically with planning code variables and planning styles.

Sample

The 72 full time students who participated in Study 1 were the intended sample for this study. Repeated attempts were made to contact all individuals through personal letters and telephone calls.

The first letter was sent to participants from the Dean of Weatherhead School of Management. The letter explained the purpose of the study, which was primarily
to begin a longitudinal study of WSOM graduates, and secondarily to study individual processes of planning for the future. Enclosed with the letter were a form granting permission to use information collected via survey/interview for purposes of research, and a copy of the interview protocol that would be used.

During the four weeks after letters were sent to prospective participants, telephone calls were made and appointments set to conduct interviews. Initially, only approximately 25% of participants could be contacted. Addresses were outdated and telephones disconnected. Through following several avenues of inquiry, new addresses and/or telephone numbers were discovered for an additional 40% of the prospective participants. Second and third letters were sent out, and repeated attempts were made to contact people by phone. Regarding the 35% of the sample not contacted, approximately half could not be reached because of unavailability of addresses or telephones. For the remaining portion of the sample it is not known whether the addresses were incorrect, or the individuals were refusing to respond.

At the end of the data collection period, 45 people had been contacted and 38 interviewed. Of the
seven who were contacted but did not participate, one refused for personal reasons, three did not have time, one had transferred to another university, and two did not return repeated telephone calls and messages.

In order to check for systematic differences between those who were interviewed in 1990 and those who were not, analysis of variance was employed to compare the two groups on demographic characteristics such as age, gender, GPA, ethnicity and GMAT; no significant differences were found between the groups.

Demographic statistics were examined for the sample of 38 to be used in this study. By the time data collection for Study 3 began in February of 1990, all but one of the sample of 38 had graduated. 71% were male, 29% female, and the median age was 29.

Data Collection

The primary method of data collection was a telephone interview using a standardized interview protocol (see Appendix V.). All participants received a copy of the protocol prior to the interview, had reviewed it and could refer to it during the actual interview.
The interview focused on five areas: demographic information; behavior during the MBA program; behavior during the job search process; current employment; and perceptions of Weatherhead School of Management, the MBA degree, and perceptions of the self in comparison to other MBA's.

Section 1 focused on demographic information. Variables used in the analysis included marital status, income, and the socioeconomic status of the family of origin. Section 2 focused on behavior during the time participants were enrolled as full time MBA students. Participants were asked to describe extracurricular activities they participated in such as workshops, clubs, internships, study groups, the Mentorship Program, and part time work. They were also asked questions about study habits, GPA, and when they decided upon an area of concentration. Section 3 concentrated on students' behaviors during the job search process. They were asked when they began seeking employment and the methods they used to research the job market. They were asked which specific resources at WSOM they took advantage of, how many resumes they sent out, the number of interviews they attended and the number of job offers they
received. They were also asked when they accepted a position and why, and how they dealt with obstacles during the job search process. Section 4 focused on the job currently held. Participants were asked to describe their major responsibilities and duties, and to outline the training they had received on the job or elsewhere. They were also asked whether the training was mandatory, or had been sought. Next, questions were asked regarding promotions and salary increases. And, participants were asked to rate their satisfaction with job and career on a seven point scale. Section 5 addressed participants' perceptions of their MBA education and how it was currently related to their work. Questions were asked about the degree to which MBA education was applied on the job, and whether the participants applied what they had learned in their area of concentration. Participants were asked which of their experiences seemed most valuable, and which were used most frequently at work. They were also asked to compare themselves with other MBA's in terms of ability, self confidence, and promotability. And, finally, they were asked how their opinions about what is important to learn in an MBA program had changed.
Hypotheses

The hypotheses presented below were developed based on the proposed relationships between planning styles, the need for achievement and efficacy. They were developed in response to the results of Study 1, which indicated that planning styles were characterized to varying degrees by these two attributes. It was expected that the need for achievement and efficacy would be highly influential in guiding the actions and behavior of people in school, as they looked for a job and at work. Simply put, it was expected that Directional planners would engage in behaviors associated with high levels of the need for achievement and efficacy. It was thought that Goal Oriented planning would be characterized by behaviors associated with high need for achievement and low efficacy. It was expected that Action Oriented planners would engage in behaviors indicative of a tendency to get involved in many activities, and that behaviors would not reflect the achievement motive. And, it was expected that Reflective planners would demonstrate behaviors associated with low efficacy and little emphasis on the achievement motive.
The hypotheses relating Directional planning to behavior during school, during a job search process and at work were developed based on the high levels of need for achievement and efficacy thought to characterize this style. For example, high achievement motivation suggests that these people would focus on specific goals, would be likely to recognize and capitalize on situations that could help them to attain their goals, and that they would set and meet high standards for performance.

In terms of efficacious behavior, the Directional planner could be expected to be self confident and generally willing to take risks. Also, high efficacy could be related to a tendency to be very involved in school and work activities.

**Hypothesis 1.a.** Directional planners were expected to choose and area of concentration in their MBA program earlier than Action Oriented planners.

**Hypothesis 1.b.** Directional planners were expected to be more likely to seek remedial help during the MBA program than Action Oriented or Reflective planners.
Hypothesis 1.c. Directional planners were expected to have higher GPA upon graduation than Action Oriented or Reflective planners.

Hypothesis 1.d. Directional planners were expected to begin the job search process earlier than Action Oriented or Reflective planners.

Hypothesis 1.e. Directional planners were expected to receive more offers of employment than Goal Oriented or Reflective planners.

Hypothesis 1.f. Directional planners were expected to use more techniques to research the job market than Goal Oriented or Reflective planners.

Hypothesis 1.g. Directional planners were expected to seek on the job training more often than Reflective planners.

Hypothesis 1.h. Directional planners were expected to receive salary increases earlier than Goal Oriented or Reflective planners.
The hypotheses relating Goal Oriented planning to behavior during school, during the job search process and at work were developed to reflect the high need for achievement that characterizes this style. This motive is indicative of the tendency to engage in goal oriented behavior, to be focused on a specific, challenging goal, to take advantage of situations that will increase chances of success, and to set and attain high standards of performance.

Hypothesis 2.a. Goal oriented planners were expected to choose an area of concentration in their MBA program earlier than Action Oriented planners.

Hypothesis 2.b. Goal Oriented planners were expected to be more likely to seek remedial help during the MBA program than Action Oriented or Reflective planners.

Hypothesis 2.c. Goal Oriented planners were expected to have higher GPA upon graduation than Action Oriented or Reflective planners.
Hypothesis 2.d. Goal Oriented planners were expected to begin the job search process earlier than Action Oriented or Reflective planners.

Hypothesis 2.e. Goal Oriented planners were expected to seek on the job training more often than Reflective planners.

The hypotheses relating Action Oriented planning to behavior in school, during the job search process and at work were developed in response to high Activity Level scores and the tendency not to engage in achievement oriented behavior. It was thought that Action Oriented planners would become involved in many activities, both related and unrelated to school and career.

Hypothesis 3.a. Action Oriented planners were expected to be more likely to work during the two years enrolled in an MBA program than Goal Oriented planners.

Hypothesis 3.b. Action Oriented planners were expected to attend more workshops than Directional, Goal Oriented, or Reflective planners.
Hypothesis 3.c. Action Oriented planners were expected to be involved in more clubs than Directional, Goal Oriented or Reflective planners.

Hypothesis 3.d. Action Oriented planners were expected to receive more offers of employment than Goal Oriented or Reflective planners.

Hypothesis 3.e. Action Oriented planners were expected to use more techniques to research the job market than Goal oriented or Reflective planners.

Hypothesis 3.f. Action oriented planners were expected to seek on the job training more often than Reflective planners.

Hypothesis 3.g. Action Oriented planners were expected to receive salary increases earlier than Goal oriented or Reflective planners.

The hypothesis relating Reflective planning to job search behavior is related directly to this style's low efficacy, unwillingness to take risks and a lack of self confidence.
Hypothesis 4. Reflective planners were expected to accept employment sooner after beginning the job search process than Directional or Action Oriented planners.

Design

Two methods of statistical analysis were used to determine the relationships between planning styles and study variables. In cases where study variables were coded as interval data, analysis of variance was used. The Duncan Procedure was used to determine which pairs of means were significantly different at the .05 level. The Bartlett Box F test was used to determine homogeneity of variance. If this statistic was significant, t-tests were used, and the statistics for separate variance examined.

When study variables were coded as either nominal or ordinal data, the chi statistic was used to determine whether planning style was related to cell membership. Because the number of cells with expected frequencies less than five was quite high, the results of these tests must be viewed with caution.

One of the problems with longitudinal studies is attrition, and this study is no exception. Just over
half of the original sample was interviewed, leaving many questions unanswered about the sample as a whole.

Furthermore, when planning styles were assigned using the method devised in Study 1, 37 of the 38 could be categorized. Within this sample, cell sizes were uneven and small: The Directional planners numbered 6; the Goal Oriented planners numbered 21; the Action Oriented planners numbered 4; and the Reflective planners numbered 6 (see Table 5.1). Obviously, results of chi square statistics and analysis of variance must be viewed with extreme caution. Still, because small cell sizes like these usually result in Type II errors, it was decided that the results were worth considering.

Table 5.1. Distribution of Subjects by Planning Style

<table>
<thead>
<tr>
<th>Planning Style</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directional</td>
<td>6</td>
</tr>
<tr>
<td>Goal Oriented</td>
<td>21</td>
</tr>
<tr>
<td>Action Oriented</td>
<td>4</td>
</tr>
<tr>
<td>Reflective</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>37</td>
</tr>
</tbody>
</table>
Results

It appears that certain behaviors in school, during the job search process, and on the job distinguish planning styles from each other. Four of twelve relationships tested by analysis of variance indicate links between planning styles and behaviors (see Table 5.2).

Table 5.2. Comparison of School, Job Search and Work Behaviors with Planning Style

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sums of Squares</th>
<th>df</th>
<th>n</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td>Within</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Workshops</td>
<td>7</td>
<td>79 (3,33)</td>
<td>37</td>
<td>.96</td>
<td>ns</td>
</tr>
<tr>
<td>Clubs</td>
<td>10</td>
<td>30 (3,33)</td>
<td>37</td>
<td>3.59</td>
<td>.024</td>
</tr>
<tr>
<td>Study Hours</td>
<td>223</td>
<td>6258 (3,32)</td>
<td>36</td>
<td>.38</td>
<td>ns</td>
</tr>
<tr>
<td>GPA</td>
<td>.72</td>
<td>3.8 (3,31)</td>
<td>35</td>
<td>.34</td>
<td>ns</td>
</tr>
<tr>
<td># Search Methods</td>
<td>24</td>
<td>236 (3,31)</td>
<td>35</td>
<td>1.06</td>
<td>ns</td>
</tr>
<tr>
<td># Resumes</td>
<td>25811</td>
<td>34359 (3,30)</td>
<td>34</td>
<td>2.74</td>
<td>.06</td>
</tr>
<tr>
<td># Interviews</td>
<td>151</td>
<td>1145 (3,31)</td>
<td>35</td>
<td>1.37</td>
<td>ns</td>
</tr>
<tr>
<td># Offers</td>
<td>.36</td>
<td>57 (3,32)</td>
<td>36</td>
<td>.06</td>
<td>ns</td>
</tr>
<tr>
<td>Supervise</td>
<td>.39</td>
<td>3991 (3,30)</td>
<td>34</td>
<td>.14</td>
<td>ns</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>.16</td>
<td>72 (3,30)</td>
<td>34</td>
<td>2.23</td>
<td>.1</td>
</tr>
<tr>
<td>Career Satis.</td>
<td>3.2</td>
<td>79 (3,30)</td>
<td>34</td>
<td>.54</td>
<td>ns</td>
</tr>
<tr>
<td>Job Relates-Career</td>
<td>19</td>
<td>67 (3,28)</td>
<td>32</td>
<td>2.51</td>
<td>.08</td>
</tr>
</tbody>
</table>
Chart 5.1: Summary of Hypotheses, Results and Outcomes (n=38)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hypothesis</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose Concentration</td>
<td>D.G earlier than A</td>
<td>Partially</td>
</tr>
<tr>
<td>Seek Help in School</td>
<td>D.G more than A.R</td>
<td>Disproved</td>
</tr>
<tr>
<td>GPA</td>
<td>D.G&gt;A.R</td>
<td>Disproved</td>
</tr>
<tr>
<td>Begin Job Search</td>
<td>D.G earlier than A.R</td>
<td>Disproved</td>
</tr>
<tr>
<td>Offers of Employment</td>
<td>D.A more than G.R</td>
<td>Disproved</td>
</tr>
<tr>
<td>Research Job Market</td>
<td>D.A more than G.R</td>
<td>Disproved</td>
</tr>
<tr>
<td>Seek Training on the Job</td>
<td>D.G,A more than R</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Salary Increase</td>
<td>D.A earlier than G.R</td>
<td>Disproved</td>
</tr>
<tr>
<td>Work During School</td>
<td>A more than G</td>
<td>Disproved</td>
</tr>
<tr>
<td># Workshops</td>
<td>A more than D.G.R</td>
<td>Disproved</td>
</tr>
<tr>
<td># Clubs</td>
<td>A more than D.G.R</td>
<td>Confirmed</td>
</tr>
<tr>
<td>Accept Employment</td>
<td>R earlier than D.A</td>
<td>Disproved</td>
</tr>
</tbody>
</table>

D=Directional Planning Style    R=Reflective Planning Style
G=Goal Oriented Planning Style  A=Action Oriented Planning Style

The chi statistic indicates relationships between planning styles and five of the twenty-five variables tested.

Of the relationships found to be significant in both analyses, only five of the results were hypothesized (see Chart 5.1). Hypotheses relating Directional and Goal Oriented planning to a tendency to choose an area of concentration earlier than Action Oriented planners were partially confirmed. The predictions that Directional, Goal Oriented and
## Chart 5: Summary of Other Significant Relationships Between Planning Styles and Behavior at School, During a Job Search and at Work (n=38)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify Company</td>
<td>D&gt;G,A,G,R</td>
</tr>
<tr>
<td>Send Resumes</td>
<td>D&gt;G,A</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>A&lt;D,R,G</td>
</tr>
<tr>
<td>Job Relates to MBA</td>
<td>G&gt;A</td>
</tr>
<tr>
<td>Job Relates to Career</td>
<td>A&lt;R,G,D</td>
</tr>
<tr>
<td>Change Opinion About MBA Education</td>
<td>G&gt;D,A,R</td>
</tr>
</tbody>
</table>

D=Directional Planning Style   R=Reflective Planning Style
G=Goal Oriented Planning Style  A=Action Oriented Planning Style

Action Oriented planners would seek on the job training more frequently than Reflective planners were also confirmed. And, as predicted, Action Oriented planners become involved in more clubs than do Directional, Goal Oriented, or Reflective planners.

Fifteen hypotheses were not confirmed, seven of which predicted relationships between the school behavior variables and planning styles. First, planning styles were not related to the tendency to seek help from a professor, nor were they related to the tendency to attend workshops at school. Planning
styles were not related to the tendency to engage in part-time work while attending school. And, planning styles were not related to GPA. Seven hypotheses relating planning style to job search behaviors were disproved. Specifically, planning styles were not related to when a person begins to seek employment, how many total methods he uses to research the job market, or the number of employment offers he receives. Finally, one hypothesis relating planning styles to behavior at work was not confirmed: planning styles did not prove to be related to when people receive raises in pay.

There were a number of unanticipated relationships found to exist between planning styles and behavioral variables, as illustrated in Chart 5.2. In the interest of presenting these results in a manner that will facilitate understanding the behaviors associated with planning style, each style will be discussed first in terms of hypotheses confirmed, and then in terms of unexpected relationships found between the style and other behavioral variables.
Directional Planning

One hypotheses relating Directional planning to behavioral variables was confirmed and one was partially confirmed. Directional planners were expected to seek on the job training more frequently than Reflective planners. This they did, as evidenced by a chi statistic of 8.45, p = .04. It was expected that Directional planners would choose an area of concentration earlier than Action Oriented planners. Although the chi statistic was only near significant (p = .08), the chi square table indicates partial confirmation of this hypothesis.

It also appears that the Directional Orientation may be related to several job search behaviors. Specifically, Directional planning is related to the tendency to identify specific companies that suit one's needs when looking for a job (chi square = 10.3, p = .02). It also appears that individuals with this style may be likely to send out more resumes than those individuals with the Goal Orientation (F = 2.74 p = .06; Duncan p <= .05). There is some indication that the Directional Orientation is related to a tendency to take a job related to long term career interests, when compared with Action Oriented planning (F = 2.51 p = .08; Duncan
Finally, the Directional planning style seems to be related to a higher level of job satisfaction, when compared with Action Oriented planning (F=2.23 p=.1; Duncan p<=.05).

Goal Oriented Planning

Two of five hypotheses relating Goal Oriented planning to behaviors were confirmed, while one was partially confirmed. As predicted, Goal Oriented planners tend to seek on the job training more than people with the Reflective Orientation (chi square=8.45, p=.04). Although the chi statistic was only near significant (.08), examination of the chi table indicates that Goal Oriented planners may choose an area of concentration earlier than Action Oriented planners.

A number of unexpected results linked Goal Oriented planning with attitudes about the job and MBA education. First, Goal Oriented planners tend to be more satisfied with their jobs than Action oriented planners (F=2.23 p=.1; Duncan <=.05). Also, Goal Oriented planners view their jobs as related to their education, while Action Oriented planners do not (F=2.51 p=.08; Duncan <=.05). Goal Oriented planners
also have a tendency to report changing their opinion about what is important to learn in an MBA program; after graduation people in this group believe that greater emphasis should have been placed on communication and group skills during the MBA program (chi square=13.27, p=.0389).

Action Oriented Planning

Two of seven hypotheses linking Action Oriented planning to behaviors were confirmed. As expected, Action Oriented planners are involved in more clubs than all others, and they seek on the job training more frequently than Reflective planners (F=3.59, p=.0237; chi square=8.45, p=.0376, respectively). An unexpected result indicates that this group is least likely to satisfied with a job, and least likely to take a job that is related to long term career interests (F=2.23 p=.1; F=2.51 p=.08 respectively; Duncan p<=.05).

Reflective Planning

The one hypothesis linking Reflective planning to a tendency to accept employment early in the job search process was disproved. However, Reflective planners appear to be more satisfied with their jobs than Action
Oriented planners ($F=2.23$, $p=.1$; Duncan $p<=.05$). And, this group is more likely than Action Oriented planners to take a job that is related to long term career interests ($F=2.51$, $p=.08$; Duncan $p<=.05$).
Discussion

Like the previous two studies, this one is plagued by too many hypotheses not supported and too many unexpected results. Again, several explanations might account for this. First, the way a person plans may have no bearing on subsequent behavior. Or, the behavioral variables used in this study may not relate strongly to the need for achievement or efficacy, and therefore can not be related to planning styles. Yet another explanation might be that planning styles do not accurately reflect need for achievement or efficacy, and therefore it is difficult to find consistent relationships with variables associated with these attributes.

Another possible way to explain the results of this study calls for examination the data collection methodology. In the interview, people were asked to talk about things they had done within the past two years or so. It is possible that faulty memories or an unwillingness to share personal information could have resulted in inaccurate data.

A final explanation for the results of this study revolves again around the methodology used to assign
planning styles, and the model of planning styles as a way to understand individual differences in the planning process. After interviewing participants I often went back to their original files to check their scores on the code and to find out which planning style they had been assigned. All too often, the conversation with the participant just did not seem to match the style: Goal Oriented planners were working in companies with no chance of advancement; Directional planners had taken mundane jobs; Action Oriented planners were focused and intent upon climbing a corporate ladder; Reflective planners were supervising more employees than any one else, and they were often in prestigious positions.

These contradictions suggest two possible problems. First, the methodology used to assign people a style may be inaccurate. As previously explained, the mathematical formula used is somewhat rigid and a score on a single code variable can determine the style assigned. Another concern revolves around the use of a stylistic model to explain individual differences in the planning process. It is possible that personal attributes such as efficacy and achievement motivation
can not be quantified in a manner suggestive of styles or discrete groups.

In summary, the results of this study were slightly encouraging, in that some behaviors could be associated with each style, and the some of the behaviors seem to related to the need for achievement and efficacy. Still, the results were not nearly as comprehensive as had been hoped.
Summary

This study added some knowledge about the planning process, and behaviors people might tend to engage in. Some information was gleaned from this study which added to the picture of planning styles; however, the picture is not nearly as complete as could be hoped, and certain parts of it are missing entirely. Like Study 2, the results were not as clear or as rich as had been hoped. Given the little information that this and the previous study lent to the understanding of planning styles, and given the growing concerns about the methodology, it seemed necessary at this point to begin reconceptualizing the model of planning as outlined in the first study. In order to do that, though, it was deemed important to develop a portrait of each planning style, including the results of all three studies. Then, it will be possible to examine the model as a whole and to make decisions regarding modifications in the methodology and the theory.

In the following chapter each planning style is discussed in terms of the construct and predictive validation studies presented so far. Then, the studies are critiqued with respect to the methodology and the
original model of planning styles. Based on the questions and concerns raised in this section, an alternative model is proposed and the results of an initial analysis presented. In the final section of this integrative chapter, the results of the exploratory analysis are discussed and evaluated.
Chapter Six

Discussion of Individual Differences in Planning

To summarize, the results of these studies indicate that there are different approaches to planning for the future, and that these differences can be measured on a number of variables. These variables, coded as Efficacy, Activity Level, Awareness, Subgoals, Opportunities/Obstacles, Flexibility, Time Orientation Clarity, and Affect seem to capture the different dimensions that influence both the cognitive and the behavioral aspects of the planning process.

A conceptual scheme linking these variables to measures of achievement motivation and efficacy formed the basis of the model tested in the construct and predictive validation studies. The model was derived from a theory that proposed achievement motivation and efficacy as two of the primary determining factors in how a person plans for the future. The relationship of planning to the achievement motive is demonstrated by a person’s desire to set and attain goals as well as the tendency to engage in behaviors associated with successfully
attaining the goal. Efficacy determines the types of activities engaged in and the level of skills attained. Efficacy also affects the attitude one has toward the future. And, efficacy can determine not only what types of goals a person chooses, but how energetic, creative and daring he is in planning to attain those goals.

Based on relative levels of efficacy and need for achievement, four approaches to planning were envisioned. A scoring system using the code variables Efficacy, Activity Level, Subgoals, Opportunities and Obstacles, and Flexibility was devised to assign people to planning styles. The four planning styles derived from this scoring system were envisioned as discrete and exclusive, and were expected to relate differentially to the need for achievement and level of efficacy, as well as to variables as hypothesized in Studies 1, 2, and 3. In the following section the four planning styles are discussed in terms of their relationships to study variables and the implications of these results for the planning process.
Directional Planning

Chart 6.1 summarizes the characteristics of the Directional Orientation toward planning as determined by these studies. Taken as a whole, the results indicate that a person employing a Directional Orientation toward the planning process has two overriding tendencies in her approach to the future. First, she seems to approach the future with a strong sense of efficacy, self-confidence, and a belief that she is capable of attaining her goals. Secondly, she tends to plan in a fairly rational, linear fashion, engaging in behaviors that characterize a person who is motivated by the need for achievement.

As expected, the Directional planner seems to fit the model of the efficacious person as conceptualized by Bandura, and she believes herself to be skilled in a number of areas related to leadership. She sees herself as highly skilled interpersonally, in the realm of information management, and in action taking skills. She believes herself to be a skilled leader, competent in interpersonal relationships, and able to understand, help and teach others. She also sees also herself as a
<table>
<thead>
<tr>
<th>Study</th>
<th>Variable</th>
<th>Related Construct</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study #1 (n=72)</td>
<td>Entrepreneurial Skills</td>
<td>Efficacy</td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td></td>
<td>Leadership Skills</td>
<td></td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td></td>
<td>Interpersonal Skills</td>
<td></td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td></td>
<td>Relationship Skills</td>
<td></td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td></td>
<td>Active Experimentation-</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reflective Observation Axis</td>
<td></td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td></td>
<td>Helping &amp; Delegating Skills</td>
<td></td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td></td>
<td>Adapting Skills</td>
<td>Vision</td>
<td>D&gt;G,A,R</td>
</tr>
<tr>
<td></td>
<td>Information Mgmt Skills</td>
<td></td>
<td>D&gt;G,R</td>
</tr>
<tr>
<td></td>
<td>Action Skills</td>
<td>Efficacy</td>
<td>D&gt;G,R</td>
</tr>
<tr>
<td></td>
<td>Information Gathering Skills</td>
<td></td>
<td>D&gt;G,R</td>
</tr>
<tr>
<td></td>
<td>Need for Achievement</td>
<td>Achievement</td>
<td>G,D&gt;A</td>
</tr>
<tr>
<td></td>
<td>Need for Power</td>
<td>Efficacy</td>
<td>D,R&gt;G</td>
</tr>
<tr>
<td></td>
<td>Setting &amp; Managing to Goals</td>
<td>Efficacy</td>
<td>D&gt;R</td>
</tr>
</tbody>
</table>

| Study #2 (n=96) | Investigative Total                        |                   | D,A>G,R      |
|                 | Social Abilities                            |                   | D>A,R        |
|                 | Science Abilities                           |                   | D>G,R        |
|                 | Investigative Activities                    |                   | D>G,R        |
|                 | Investigative Competencies                  |                   | D,A>R        |
|                 | Abstract Conceptualization                  | Vision            | D,A>G        |
|                 | Abstract Conceptualization-                | Vision            | D>G          |
|                 | Concrete Experience Axis                   |                   | D>G          |

| Study #3 (n=38) | Identify Companies                         | Efficacy          | D>G,A,R      |
|                 | Seek on the Job Training                   | Achievement       | D>A          |
|                 | # of Resumes                               | Efficacy          | D>G          |
|                 | Job Satisfaction                           |                   | D,G,R>A      |

D=Directional Planning Style   R=Reflective Planning Style
G=Goal Oriented Planning Style A=Action Oriented Planning Style
skilled information processor, who can gather information from a variety of sources, interpret it, and use it to adapt to changing circumstances.

In summary, the Directional planner seems to be able to successfully set and attain goals, to be a risk taker, and to be the one to take responsibility and show initiative. She sees herself as having the ability and the desire to influence others and to be a person that makes things happen. Overall, the Directional planner seems to be characterized by self confidence and a strong belief in her ability to engage successfully in activities.

In addition to being efficacious, the Directional planner tends to approach planning in a rational, analytical fashion with a focus on success. When faced with challenges, she tends to take advantage of opportunities and obstacles as they present themselves. She tends to engage in instrumental activities that will help insure goal attainment, she uses subgoals in order to be able to chart progress toward a goal, and tends to anticipate success. This model of planning for goal attainment is very similar to the one developed by McClelland and colleagues, which postulates a natural process of planning focused on
goal attainment and success (McClelland, Atkinson, Clark, & Lowell, 1953; Atkinson, 1958; McClelland, & Winter, 1971; McClelland, 1976).

Some of the characteristics associated with the Investigative Personality Type support the notion of an achievement oriented planner who is rational, methodical, and intent upon systematically moving toward goal attainment. However, there are other characteristics of this type, such as cautiousness, which seem to be in conflict with the efficacious nature of Directional Planning.

In summary, the Directional Orientation toward planning is characterized by both intense purposiveness and a willingness to be flexible regarding specific goals. The Directional planner sees the "big picture" and seems to recognize that there are many ways of turning a vision into reality.

"Becky", who participated in Study 3, epitomized the Directional planner as she talked about her goals:

I want to get into physical therapy school after graduation, and I am taking the courses I need to prepare. I have also done the volunteer hours in the field; in fact, I've done more than necessary because I thought...it would be good exposure.
Becky's self confidence is extremely high, but she recognizes that her chosen field is competitive and her grades are not as good as they could be. Still, she believes that she would succeed in the tough physical therapy program, based on her total commitment to the field and above all her commitment to people.

I'm not a straight A student, I mean I study, but where someone may feel I am lacking, I think people come first. I love people, I will drop a test or something else, if someone needs me. That's just what I believe, you just can't ignore people, they come first. I love people so much.

Becky sums up, in a sentence or two, the most distinguishing characteristics of the Directional planner. She knows what she wants, and is willing to do just about anything to get that: "This is all I want to do...This is what I have planned, this is what I am working towards, this is basically all I want to do..."

Like Becky, the Directional planner is purposeful, committed, and efficacious. She is clearly following a path leading to fulfillment of a mission, and is able to identify some of the steps she needs to take to make her vision a reality.
Goal Oriented Planning

Unlike Directional planners, Goal Oriented planners tend to focus on very specific goals which are not necessarily connected by an overarching purpose. Goal Oriented planners are focused on a specific outcome, rather than on pursuing a dream or fulfilling a mission as are their Directional counterparts.

As summarized in Chart 6.2, the Goal Orientation leads with an approach to planning that focuses on the systematic attainment of goals. Goal Oriented planners tend to be systematic and linear in their planning processes: they outline paths to goal attainment including subgoals marking progress, and anticipation of opportunities and obstacles. They anticipate success, and seem to be driven by a singular purpose related to the successful attainment of a specific goal. They do not tend to veer from the chosen path, and remain focused even in the face of distractions.

As evidence of this, Goal Oriented planners tend to take jobs that are directly related to their MBA degrees. Given that for many of the graduates there are numerous job opportunities in a wide variety of fields, it is notable that these people have chosen jobs that they believe are directly related to their
fields of study. Furthermore, in the interviews it was evident that it was important to these people that there be a clear relationship between their current job and their education.

Another link with the achievement motive is indicated by the Goal Oriented planner's tendency to seek on the job training. Once again, it is expected

**Chart 6.2  Goal-Oriented Planning, Summary of Results**

<table>
<thead>
<tr>
<th>Study</th>
<th>Variable</th>
<th>Related Construct</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study #1</td>
<td>Need for Achievement</td>
<td>Achievement</td>
<td>G,D,A</td>
</tr>
<tr>
<td>(n=72)</td>
<td>Reflective Observation</td>
<td></td>
<td>G,R&gt;D</td>
</tr>
<tr>
<td>Study #2</td>
<td>Active Experimentation</td>
<td></td>
<td>G&gt;D,A,R</td>
</tr>
<tr>
<td>(n=96)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study #3</td>
<td>Changes Opinion</td>
<td></td>
<td>G&gt;A,R,D</td>
</tr>
<tr>
<td>(n=38)</td>
<td>Job Satisfaction</td>
<td></td>
<td>D,G,R&gt;A</td>
</tr>
<tr>
<td></td>
<td>Job Relates to MBA</td>
<td>Achievement</td>
<td>G,R&gt;A</td>
</tr>
<tr>
<td></td>
<td>Seeks on the Job Training</td>
<td>Achievement</td>
<td>G&gt;R,D A</td>
</tr>
</tbody>
</table>

D=Directional Planning Style  R=Reflective Planning Style
G=Goal Oriented Planning Style  A=Action Oriented Planning Style
that the person who is focused and who intends to succeed will engage in behaviors that will enhance chances of success. In summary, the Goal Oriented planner follows the "natural" process outlined by McClelland and colleagues in their research on the achievement motive (McClelland, Atkinson, Clark, R., & Lowell, 1953; Atkinson, 1958; McClelland, & Winter, 1971; McClelland, 1976).

Goal Oriented planners also experience a sense of satisfaction with their jobs. This may be due to the fact that their primary aim was to stay focused, complete the MBA successfully and get a job related to their specialty. This they have accomplished and they are pleased with themselves.

An interesting finding in this study was that after graduation, Goal Oriented planners have changed their opinions about what is important to learn in an MBA program. Specifically, after graduation this group tends to believe that communication and group management skills should receive more emphasis in the MBA program.

This result can be explained by considering the Goal Oriented planner's general approach to education. By and large, these people tended to see the degree as
a means to an end. They wanted to learn the concrete skills that would get them the job of choice, whether it be financial analyst, accountant, or manager. Once out in the real world, it seems that they recognized that the "hard" skills were simply not the only thing necessary if one were to succeed. They realized that in addition to job related skills, softer skills such as communication, managing people in groups, negotiating, and dealing with conflict were also important.

In summary, the results of these studies indicate that the Goal Orientation toward planning for the future is driven by the need for achievement, and is characterized by behaviors that lead to successful attainment of a goal. One Goal Oriented student, interviewed during the spring 1990, provides some useful insight into this type of planning. "Sean" had a very clear and specific goal in mind, which was to eventually own a seaside cafe:

a restaurant with a bar, that includes two or three floors. One of those floors would be for pool and other sports...another would be a floor for dancing, with a band or disc jockey, maybe inside and outside on the patio. Plus, I'd want a place where there was really high quality food.
Sean envisioned his restaurant very clearly, down to details such as the type of employee he would like to hire, the kinds of food he would serve, the arrangement of the game room, and even the type of art on the walls. He outlined a plan of action that he believed would insure success, and he anticipated problems and opportunities:

What I want to do, right after graduation, is to get a job out of school, a decent paying managerial job. I don't plan to get married or anything, just save my money...until I have enough to start small. I expect to start with a partner...that's because this will take a lot of money and a partner will help me start sooner. I have a friend who is interested...

Sean is expecting to follow a straight path to his goal: first, he will graduate, then get a job in his field to earn money. He will shy away from distractions, and try to take advantage of the opportunities that may arise. He is anticipating that a partnership will enable him to reach his goal that much sooner, and he is cultivating a relationship that might develop into such a partnership. He is willing to start small, even if it means opening up the first cafe near his hometown, where land is cheap. In short, Sean is almost entirely focused on attaining the goal
he has set for himself. He is constantly considering the various ways he can increase his chances of success, and he believes in himself:

I am always thinking of all the things I can do...my ideas and my creativity will help...I am a hustler, and I’m willing to do the hard work, to get what I want. I think I would create a good positive atmosphere, and I think I can make this happen.

In summary, Goal Oriented planners appear to be focused on specific goals, and they tend to follow a process of planning related to the need for achievement. They are similar in many respects to Directional planners, in that they are rational and linear in their approaches to the future and are quite self confident. Probably the key distinguishing factor that differentiates these two groups is that Directional planners tend to relate their goals and subgoals to an overarching purpose, while Goal Oriented planners do not.
Action Oriented Planning

The Action Orientation to planning seems to be related to a scientific approach to dealing with the environment. As summarized in the Chart 6.3, results indicate that the Action Oriented planner seems to be similar in many ways to Holland’s Investigative Personality Type (1973), and he enjoys mathematics, problem solving, and working on scientific projects. Inherent in this style is the tendency to be methodical, analytical, and systematic. If these characteristics carry over into the planning process, the assumption can be made that this type of planner will be thoughtful, cautious and systematic when planning a course of action. He will approach the future as if it were scientific inquiry, systematically observing situations as they develop, gathering relevant information, and making decisions with the intent of predicting and controlling the future.

Overall, the picture painted by these results only vaguely resembles the original conception of the Action Orientation to planning. While there is some indication that these people do indeed become involved in many activities, the evidence is slight and
overshadowed by results linking this style with the tendency to be scientific and methodical.

"Brian", an Action Oriented planner who participated in Study 3, was interviewed and gives us some insight into the paradoxical behaviors that might be associated with this planning style. Brian was not very clear about what was important to accomplish in the future. He liked being around people, and wanted to be able to support himself, but other than that

| Chart 6.3  Action-Oriented Planning, Summary of Results |
|------------|----------------|
| Study      | Variable            | Related Construct | Result          |
| Study #1   | Reflective Observation | Achievement       | A>D             |
| (n=72)     |                      |                   |                 |
| Study #2   | Investigative Activities |                 | A>G  D>G,R      |
| (n=96)     | Investigative Total |                   | D,A>R           |
|            | Investigative Competencies |               | D,A>R           |
|            | Math Abilities       |                   | A>G             |
|            | Abstract Conceptualization |             | D,A>G           |
| Study #3   | # Clubs              | Efficacy          | A>G,R,D         |
| (n=38)     | Seeks on the Job Training |             | A>R             |

D=Directional Planning Style  R=Reflective Planning Style
G=Goal Oriented Planning Style  A=Action Oriented Planning Style
could not seem to focus on a particular goal. He was, at the time of the interview, six months away from graduation, and was intending to pursue a second undergraduate degree, because he found he was not satisfied with his major, and did not want to pursue a job in that area. Brian’s lack of focus is apparent as he talks about what he might do:

I guess I could teach. I’ve coached volleyball and I really enjoyed that. I’m very interested in nutrition and health, and being a healthy person. Right now, all I can think about is this Earth Day coming up, and I am so concerned with the environment. I’m thinking about becoming a vegetarian...you know, I don’t want to be one of those people who talk about things, I want to do things...I mostly want to have a good life.

Clearly, Brian was not focusing on a future career goal. He was more concerned with what was happening today, and his current interests, and did not seem to link these with what he could do in the future.

When asked about career decisions, Brian talked about a time when he had decided to become a chiropractor, and had devoted much time and energy to finding out exactly what that would mean. After researching the field, he decided that it was too difficult and time consuming; the idea of spending four years in training was not easy for him to contemplate.
At the end of all this, he more or less fell into a different major that other people thought would be good for him.

I was going to be a chiropractor, I got all the information, did some real heavy research, sent away for all the information I could, talked to some people in the field...I realized that it was too much of a commitment and my heart wasn’t in it. I need something more where I could set a goal in my range, time wise, and one that is not so stressful. It was a stress on me...because I wasn’t doing well and it was taking a lot of my time that I could have been spending doing something else. If something doesn’t keep my interest, I just don’t want to do it.

In summary, Brian demonstrates some of the qualities of the Action Oriented planner. He is not focused on the future, but not necessarily worried about it either. He feels pretty sure that no matter what he does, things will turn out all right. He does have the ability to systematically investigate his environment, but that ability does not necessarily result in focused planning. In short, Brian is not all that concerned with what may happen tomorrow; he is concerned with what is happening today.
Reflective Planning

These studies indicate that the primary characteristic of the Reflective planner is a need to have impact on others (see Chart 6.4). Both the need for power and the tendency to like Enterprising Activities indicate a concern with influencing other people, whether it be through direct force or indirect methods such as status. The Reflective planner enjoys supervising, influencing others, and meeting important people, all characteristic of the person with a high need for power.

<table>
<thead>
<tr>
<th>Chart 6.4: Reflective Planning, Summary of Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Study #1</td>
</tr>
<tr>
<td>(n=72)</td>
</tr>
<tr>
<td>Study #2</td>
</tr>
<tr>
<td>(n=96)</td>
</tr>
<tr>
<td>Study #3</td>
</tr>
<tr>
<td>(n=38)</td>
</tr>
</tbody>
</table>

D=Directional Planning Style  R=Reflective Planning Style
G=Goal Oriented Planning Style  A=Action Oriented Planning Style
Like the Goal Oriented planner, the Reflective planner tends to take a job that is directly related to his MBA degree, and tends to be quite satisfied with it.

The implications of these tendencies and behaviors for the process of planning are that this planning style might be characterized first by a dependence on other people: those who are concerned with having impact on others may tend to take other people’s views into consideration when making decisions or planning actions. Although it would be too much to say that Reflective planners are trying to please others, some of the questionnaires do indeed indicate that these people are at least trying to impress others, and are doing what is expected of them. This might relate to their high need for power, and also explains the fact that these people have jobs related to their degrees: they have not veered from the path set out initially, as that may have displeased those whom they were trying to impress.

This notion of dependence on others for guidance in the planning process was certainly part of the original vision of the Reflective Orientation toward planning. In the interviews, the Reflective planner
tended to approach his or her future with a vague sense of purpose, and was by and large dependent upon the social environment for guidance in both planning and carrying out plans.

A Reflective planner interviewed in the spring of 1990 talks about her future, and depicts some of the characteristics thought to be inherent in this planning style. "Tracy" gives some indication that having impact on other people is important to her, and she is also quite dependent on others for guidance and direction.

At the time of the interview, Tracy was majoring in marketing and working part time in both a liquor store and a grocery store. She enjoyed the idea of marketing as a career, and especially liked the aspect of control involved in selling. She says,

I like the selling part of marketing. I like convincing people. My experience from the grocery store, is, you know, 'Oh, come on try this product', and they come back and you're happy that you convinced them to try something new.

Although she did not officially hold a management position in the grocery store, she fulfilled many of a manager' duties and enjoyed them. When talking about what she liked about her job, she said,
I like it because I get to make the schedule out, I get to be the boss. I'm not strict or nothing, I don't pick favorites. I like working out the problems with the people.

Tracy's career aspirations were by and large related to the aspirations of those around her. Before college, she had thought she would join her father in his barbershop. "I would have had freedom, everything was right there for me, I wouldn't have had to worry about anything, but that seemed too easy".

At the time of the interview, she was considering managing either a grocery store or a liquor store, primarily because her bosses in both stores were encouraging her to do so. When prompted to dream, to think beyond what others were telling her she could do, she had a hard time. She seemed to know that finding a position that would enable her to be in control was important, but she could not envision what this position might be. In short, she wanted control and influence in her job, but was not able to envision her future without the help of others.

In summary, Tracy illustrates some of the attributes thought to characterize Reflective planning. Having impact on others is important to her, and she is relatively satisfied with her work, primarily because
relatively satisfied with her work, primarily because she holds a position of relative power. She has some aspirations for the future, and wants to "get ahead", but by and large her vision is limited to the ideas and suggestions of people close to her.
Critique of the Studies

Although the three studies of planning styles have indicated that there are indeed different approaches to planning, and that these approaches to planning may be related to various personality variables and behaviors, there are several concerns and questions left unanswered at this point. First, these studies were designed to consider homogeneous groups of people, and thereby excluded the study of major factors affecting thought processes and behaviors, such as age and cultural background. The second major question that must be addressed about these studies involves the process of assigning people to discrete styles of planning for the future. This methodology may have masked or confounded the results obtained in the studies.

Homogeneous vs. Heterogeneous Samples

The choice to study people who were of similar age and background was made deliberately at the outset of this investigation. This was done, quite simply, to minimize the complexity of an already complex study by controlling for obvious factors which would certainly
affect how a person thinks about the future. Major personal factors such as age and stage in life as well as socio-cultural factors such as ethnicity, nationality, and educational background clearly affect people's thought patterns and behavior, including their sense of efficacy and the degree to which achievement is a motivating factor. In short, socio-cultural factors will likely affect how people plan for the future.

While it was necessary to simplify this initial study, exclusion of consideration of these factors most probably limited the results of the studies. It is more than likely that a 25 year old, middle class Caucasian raised in a small town in the United States would consider his future in much different terms than a 25 year old from a poor family in a developing country, or a 60 year old of any cultural background. In order to gain a more thorough understanding of the individual differences that affect the process of planning, future studies should be designed to include and address socio-cultural factors.
Individual Differences and Planning Styles

Another critique of the studies relates to the choice to study individual differences in terms of discrete planning styles. It is possible that this model and the methodology used to test it may have accounted for two general problems in the studies. The first of these problems, discussed below, is that the method used to assign people to planning styles excluded four of the individual difference variables discovered by the thematic analysis in Study 1. The second problem relates to the descriptions of the planning styles based on results of the studies: many hypotheses were not supported and the resultant portraits of planning styles are not as rich as had been hoped. Related to this, planning styles were initially thought to be discrete and exclusive, but results indicate that in some cases more than one of the styles is characterized by the same personality or behavioral variable.

In considering the first problem with the studies, it must be noted that thematic analysis identified nine variables that seemed related to the planning process. Only five of these variables also related to measures of achievement motivation and efficacy, and only these
five variables were used to assign people to a planning style. The four variables excluded from this process (Awareness, Time Orientation, Clarity and Affect) may have a profound effect on the planning process, but because the variables were dropped from the analysis, relationships between them and the process of planning could not be tested.

Awareness, or the ability to articulate what is meaningful and important to consider when embarking upon a course of action, may well be related to the ability to direct one’s actions toward a satisfying, meaningful end. Time Orientation, or how far into the future a person can see, most certainly relates to how he envisions the future, as does the Clarity with which he envisions a goal. Finally, how a person feels about his plan (Affect) could determine how much energy he is willing to expend on it, or even whether he will continue on a particular course. In summary, elimination of these variables from the process of assigning a person to a planning style may well have narrowed the results of the study.

The second general problem in these studies of individual differences in planning revolves around the concept of discrete, exclusive planning styles. Many
of the hypotheses relating planning styles to personality variables and behaviors were not supported, and some variables were found to characterize more than one planning style.

As originally envisioned, each of the four styles was quite distinct from the others, and was characterized exclusively by certain personality variables which would affect ways of thinking about the future and engaging with the environment. It was expected that planning styles would relate to broad measures of personality type, such as motives, value orientations, Interpersonal Styles, Learning Styles, and Holland’s Personality Types.

Contrary to expectations, planning styles were not related at all to either values or interpersonal styles. And, LSI results in Studies 1 and 2 were contradictory, indicating that Learning Style variables may not be directly related to styles of planning for the future.

Finally, results indicated some relationships between Holland’s Personality Types and planning styles. However, most of the relationships expected to exist were not found, and some that were found were unexpected. For example, the Reflective Orientation
was found to relate to the Enterprising Personality Type. As originally envisioned, the Reflective planning style was thought to be lacking in efficacy, yet this characteristic is most likely typical of the Enterprising Type, judging by the adjectives Holland uses to describe it: adventurous, optimistic, self confident, etc.

Another unexpected finding related to the Holland Personality types was that the Investigative Type characterized both the Directional and the Action Oriented planning styles. The fact that this Type characterizes both styles leads to questions about how discrete the planning styles really are.

The question of whether or not the styles are discrete must also be raised when examining the data gathered on the behaviors demonstrated by people with different styles. Three of the four styles tended to seek on the job training, and two styles tended to choose jobs related to their MBA degrees and were satisfied with their jobs. While these results have been explained in part, the fact that more than one style demonstrates certain behaviors could mean that the styles are not discrete.
In summary, there are some problems with the design of these studies that could have led to incomplete or even invalid results. The studies concentrated primarily on white, middle class people who were nearly the same age and at the same stage in their lives. And, the assignment of individuals to discrete planning styles may have confounded the results of these studies by limiting the focus and masking possible relationships. While the first problem must be addressed in future studies, this second problem can be at least partially addressed at this point.

In order to address the problems inherent in studying individual differences in planning in terms of planning styles, the following section will introduce an alternative methods for analyzing the code variables identified in Study 1. The section will first focus on the process of identifying variable scales that are conceptually linked to planning. Then, the scales will be analyzed and discussed in terms of both the personality and the behavioral variables used in Studies 1, 2, and 3.
Analysis of Code Variables and Scale Development

The intent of this analysis was to determine whether individual difference variables that affect the process of planning for the future relate to each other and to personality and behavioral variables in a meaningful way. The first question addressed by this study was whether individual difference variables identified in Study 1 could be grouped to form scales representative of the achievement, efficacy and/or the vision dimensions of the planning process. The second question was whether these scales were associated with either personality variables or behaviors related to the process of planning for the future. The basic methods used to answer these questions were first develop scales using factor analysis, and then to employ analysis of variance and the Pearson’s product moment correlation to test the relationships between the scales and variables used in Studies 1, 2, and 3.
Scale Development

It was decided that the primary method of analysis in identifying scales would be factor analysis. It was determined that the variables identified in Study 1 (Efficacy, Activity Level, Awareness, Subgoals, Opportunities/Obstacles, Flexibility, Time Orientation, Clarity and Affect) were normally distributed and related to one another in a linear fashion. (Bartlett test of Sphericity=115.13, p=.000). The relationships between the variables were determined to be strong enough to apply the factor model based on the relatively small proportion of large coefficients in the anti-image correlation matrix. The Kaiser-Meyer-Olkin measure of sampling adequacy was small, but acceptable (.55) indicating that the correlations between pairs of variables could be explained in part by other variables. These results indicated that the factor model was an appropriate technique for exploring the relationships between the code variables.

The variables analyzed were exactly as defined in the code with the exception of the variable Clarity. This variable was determined to be curvilinear due to an error in code development. Both levels 1 and 3 of this variable referred to defining the goal in terms of
a job or role, while level 2 referred to defining the goal in terms of developing the self for the future. For this reason, the variable was recoded: levels 1 and 3 became level 1; level 2 remained the same.

Principle Axis Factor Analysis was chosen as the method of initial factor extraction because this method relies on real, rather than error variance and results in a more reliable estimation of the underlying factors. Varimax rotation was chosen based on the hypothesis that the underlying factors were orthogonal. The final number of factors to extract was based on the number of Eigenvalues above 1.0. Results of the factor analysis are presented in Table 6.1.

In examining the results of this factor analysis, it appears that there are three factors which account for 49.8% of the variance. Components of these factors were chosen based on factor coefficients above .50, and at least a difference of .1 between one factor loading and another.

Factor 1 includes Efficacy, which loads at .75, Activity Level, .51, and Awareness, .61. Factor 2 consists of Opportunities/Obstacles, loading at .61 and Subgoals, loading at .74. Factor 3 consists of Flexibility, which loads at .63, Time Orientation, at
.56 and Clarity, loading at .61. The variable Affect was dropped from the analysis because it loaded on more than one factor.

Scales were developed by adding variable scores after multiplying them by their factor loadings (e.g. Efficacy(.75) + Activity Level(.51) + Awareness(.61)). The Scales were labeled according to the supposed relationship to the underlying theory and the relationship of the component variables to the planning process: Scale 1= Efficacy; Scale 2=Achievement Orientation; Scale 3=Vision. Pearson's product moment correlation indicated that the scales were independent: no significant correlations exist.

Additional exploratory analysis was conducted to determine the relationship of the scales to planning styles (see Table 6.2 for mean scores of each planning style on scales). Two of the scales, Efficacy and Achievement Orientation, were related significantly to planning styles. Efficacy was related to the Directional, Goal Oriented and Action Oriented planning styles (F=29.3, p=.00). The Achievement Orientation scale was related to the Directional and Goal Oriented styles (F=17.06, p=.00).
### Table 6.1. Principal Axis Factoring with Varimax

Rotation (n=168)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficacy</td>
<td>0.74501</td>
<td>0.03660</td>
<td>-0.37539</td>
</tr>
<tr>
<td>Activity Level</td>
<td>0.50764</td>
<td>-0.40310</td>
<td>0.14826</td>
</tr>
<tr>
<td>Opportunities /Obstacles</td>
<td>0.14812</td>
<td>0.61466</td>
<td>0.31197</td>
</tr>
<tr>
<td>Subgoals</td>
<td>0.00375</td>
<td>0.74044</td>
<td>-0.02881</td>
</tr>
<tr>
<td>Flexibility</td>
<td>0.01630</td>
<td>-0.39122</td>
<td>0.62835</td>
</tr>
<tr>
<td>Awareness</td>
<td>0.60985</td>
<td>0.14397</td>
<td>0.22379</td>
</tr>
<tr>
<td>Time</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>0.22059</td>
<td>0.19381</td>
<td>0.55777</td>
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<td>Clarity</td>
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<td>0.08245</td>
<td>0.60648</td>
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<td>Affect</td>
<td>0.52420</td>
<td>0.48349</td>
<td>-0.07071</td>
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</table>
Table 6.2: Mean Scores of Scales on Planning Styles
(n=157)

<table>
<thead>
<tr>
<th>Planning Style</th>
<th>Scales</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Efficacy</td>
</tr>
<tr>
<td>Directional</td>
<td>4.48*</td>
</tr>
<tr>
<td>Goal Oriented</td>
<td>3.53*</td>
</tr>
<tr>
<td>Action Oriented</td>
<td>4.17*</td>
</tr>
<tr>
<td>Reflective</td>
<td>3.08</td>
</tr>
</tbody>
</table>

(F=29.30) (F=17.06) (F=1.37)
(p=.000) (p=.000) (p=.25)
Results of Analyzing Efficacy, Achievement Orientation and Vision Scales

This section summarizes the results of analyzing the Efficacy, Achievement Orientation and Vision scales that were identified through factor analysis. The scales have been analyzed for construct and predictive validation using the personality, value, skill level and behavioral variables from the first three studies. Following each summary of results is a section discussing the scale in terms of its relationships to the study variables, and in terms of its overall meaning and effect on the process of planning.

Scale 1: Efficacy

The scale labelled Efficacy is comprised of the code variables Efficacy, Activity Level, and Awareness. Analysis of variance and Pearson's product moment correlation were employed to determine the relationships between the scale and personality and behavioral variables. A summary of significant correlation results appears in Table 6.3, and ANOVA results in Table 6.4.
A number of interesting results were discovered in this analysis. First, the Efficacy scale is related significantly to several ESP variables, namely the Interpersonal Skills Quadrant, the Information Management Skills Quadrant, and the Action Skills Quadrant. Supporting these positive correlations are significant relationships with five Skill Scales: Leadership, Helping and Delegating, Adapting, Information Gathering, and Setting and Managing to Goals. An additional Skill Scale, Technology Management, was also found to correlate positively with the Efficacy scale.

A second set of results, from analysis of Study 2 variables, links the Efficacy scale with the tendency to like Office Skills, as measured by the SDS. Also, there is some indication that this scale is related to the Abstract Conceptualization dimension of the LSI, although this result does not cross validate in Study 1.
Table 6.3. Significant Correlations between the Efficacy Scale and Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Study 1 (n=72)</th>
<th>Study 2 (n=96)</th>
<th>Study 3 (n=38)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Skills</td>
<td>.28</td>
<td></td>
<td></td>
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<tr>
<td>Information Mgt. Skills</td>
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<td></td>
<td></td>
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<tr>
<td>Action Skills</td>
<td>.36</td>
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<td>Leadership Skills</td>
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<tr>
<td>Helping &amp; Delegating Skills</td>
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<td></td>
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<tr>
<td>Adapting Skills</td>
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<td></td>
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<tr>
<td>Information Gathering Skills</td>
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<td></td>
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<tr>
<td>Setting &amp; Managing to Goals</td>
<td>.35</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Management Skills</td>
<td>.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Resumes Sent</td>
<td>.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Interviews</td>
<td>.53</td>
<td></td>
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Table 6.4. ANOVA Main Effects, Efficacy Scale by Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sums of Squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td>Within</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Club Officer</td>
<td>1.5</td>
<td>15.49</td>
<td>(1,36)</td>
<td>3.49</td>
</tr>
<tr>
<td>Study Group</td>
<td>4.51</td>
<td>12.46</td>
<td>(1,34)</td>
<td>2.90</td>
</tr>
<tr>
<td>Identify Company</td>
<td>3.03</td>
<td>12.23</td>
<td>(1,34)</td>
<td>8.42</td>
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<tr>
<td>Use Library</td>
<td>1.88</td>
<td>13.39</td>
<td>(1,34)</td>
<td>4.77</td>
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<tr>
<td>Social Class</td>
<td>3.66</td>
<td>12.84</td>
<td>(3,32)</td>
<td>3.04</td>
</tr>
</tbody>
</table>

Finally, the Efficacy scale is related to a number of variables associated with behavior during the MBA program, during the job search process, and on the job. Specifically, high scores on the scale are related to the tendency to hold office in school related clubs (Duncan p<=.05), and to study often in a group with other students.

When searching for a job, those who score high on this scale tend to use the library to research the job market and then to identify specific companies to apply
to. Also, these individuals send out more resumes and attend employment interviews.

In summary, the Efficacy scale seems to be related to a wide variety of self reported skills, and to a number of behaviors associated with active involvement in school related activities and the job search process. A final interesting result of this analysis relates high Efficacy scale scores to reported membership in the upper socioeconomic class.

Discussion

The Efficacy scale appears to be the dimension of the planning process that relates to a person’s sense of his own abilities, coupled with his energy level and the degree to which he is aware of what is important to him. A high level of self confidence in one’s abilities would lead naturally to the tendency to get involved in a wide variety of activities. Such exposure can lead not only to skill development, but to refined preferences and a clear sense of what is inherently interesting or important.

According to Bandura (1982, 1989), people high in efficacy may actually be more skilled than those who are relatively inefficacious. Efficacy affects
behavior, and in particular, the decisions about which actions to engage in, how much effort to expend, and how long to persist when trying to learn or accomplish a task. This leads logically to an assumption that people who are high in efficacy are likely to become engaged in more actions, expend more energy on them, and persist long enough to become skillful.

If this is true, it is not surprising that people who score high on this scale tend to hold office in extracurricular clubs: they are recognized as competent and voted into office. Of course, another possible explanation for this result is that efficacious people are simply more active than most, and choose to take on the additional burden of work inherent in holding office in a club.

The willingness to get involved in a wide variety of areas could also lead to more refined preferences: when a person has actually tried something, she is more likely to be able to speak clearly one way or the other about how she feels about it. Then, when planning a future course of action, she is able to articulate a clear direction she wishes to pursue, based on her experiences and well defined interests and values. She is then willing and able to direct her energies toward
those activities that might be most likely to enable her to pursue her interests.

This purposefulness might explain the job search behaviors of those people scoring high on this scale. They tend to research the market thoroughly, seeking out those companies that most closely resemble their "ideal" environment. Those graduates who did this were in most cases able to articulate very clearly what it was they were looking for in a company, whether it be a familial atmosphere, or an opportunity to develop specific skills.

A final interesting result of this analysis is that people who score high on the Efficacy scale tend to claim membership in the upper socioeconomic class. A possible explanation for this result is that the person who scores high on this measure does indeed hail from the upper class, and membership in a privileged social group has led to a high level of self confidence and purposefulness.

"Becky", the Directional planner in the previous section, seems to illustrate some of the qualities that this scale measures. She is focused on a course of action that relates directly to her interests, and has an intensely felt sense of purpose. She is also
extremely self-confident, believing herself to be capable of attaining her goal, despite a recognition of personal shortcomings. She is extremely energetic, willing to try just about anything that is related to what she believes to be important.

Certainly a person like Becky is likely to plan to attain goals that are inherently meaningful to her. She will also have the confidence and energy to embark upon a path that will likely lead to attaining her goals. Still, taken to the extreme, planning with an emphasis on this scale could lead to interference with reaching a goal or fulfilling a purpose.

The most likely problem to arise when the Efficacy scale is overemphasized is that a person will concentrate on the larger purpose, and ignore the details of planning for specific goal attainment. Again, Becky demonstrates this tendency. She was completely focused on embarking on a career that would enable her to help people, yet she had neglected to take care of some of the details that would enhance her chances of success. For example, she had decided to apply to a particular graduate school, because she felt that it was the best place for her to study physical therapy. She had researched the school, talked to
people involved in administration of the program she was interested in, even talked to alumnae. The one thing she had not done, six months prior to the time she expected to begin the program, was to request and fill out an application. She was so focused on the future that she was simply forgetting to take care of business today.

In summary, the Efficacy scale seems to measure that dimension of the planning process related to personal characteristics and temperament, namely self confidence, energy level, and sense of purpose. Taken as a whole, these three attributes may contribute to what a person chooses to do, how he intends to carry his plans, and possibly how satisfied he is with the results.

Scale 2: Achievement Orientation

The Achievement Orientation scale is comprised of the variables Subgoals and Opportunities/Obstacles. Both of these variables have been linked with the process of planning employed by the person motivated by need for achievement; hence, the name of the scale. Tables 6.5 and 6.6 summarize the relationships found to exist between this scale and the personality and
behavioral variables under consideration in Studies 1, 2, and 3.

First, there is a positive correlation between this scale and the need for achievement. There is also a positive correlation with the Investigative Personality Type total score, supported by a positive correlation with the Science Abilities Score. There is a negative correlation with the Enterprising Occupations score, indicating that as the score on the Achievement Orientation scale goes up, interest in Enterprising Occupations goes down.

Table 6.5. Significant Correlations between the Achievement Orientation Scale and Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Study 1 (n=72)</th>
<th>Study 2 (n=96)</th>
<th>Study 3 (n=38)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for Achievement</td>
<td>.29</td>
<td>-.22</td>
<td>.47</td>
</tr>
<tr>
<td>Investigative Total Score</td>
<td></td>
<td>.23</td>
<td></td>
</tr>
<tr>
<td>Science Abilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enterprising Occupations</td>
<td></td>
<td>.25</td>
<td></td>
</tr>
<tr>
<td>Number of Job Offers</td>
<td></td>
<td></td>
<td>.049</td>
</tr>
</tbody>
</table>
Table 6.6. ANOVA Main Effects, Achievement Orientation

Scale by Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sums of Squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td>Within</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mock Interview</td>
<td>1.14</td>
<td>8.43</td>
<td>(1,34)</td>
<td>4.60</td>
</tr>
<tr>
<td>Concentration</td>
<td>1.83</td>
<td>8.22</td>
<td>(4,31)</td>
<td>1.72</td>
</tr>
<tr>
<td>Date Accept Job</td>
<td>3.11</td>
<td>6.49</td>
<td>(4,30)</td>
<td>3.60</td>
</tr>
<tr>
<td>Salary Increase</td>
<td>1.13</td>
<td>8.00</td>
<td>(1,32)</td>
<td>4.52</td>
</tr>
<tr>
<td>Change Opinion</td>
<td>1.82</td>
<td>7.31</td>
<td>(2,31)</td>
<td>3.86</td>
</tr>
<tr>
<td>Social Class</td>
<td>3.14</td>
<td>6.91</td>
<td>(3,32)</td>
<td>4.84</td>
</tr>
</tbody>
</table>

There appear to be some interesting relationships between the Achievement Orientation scale and behavior during the MBA program, behavior during the job search process, and perceptions of MBA education. High scores on this scale indicate a tendency to avoid participation in the Mock Interview workshop offered at the university. High scores also indicate a tendency to decide early in the program on an area of concentration.

High scores on the Achievement Orientation scale correlate positively with the number of job offers
received, and there is a tendency for people with this orientation to accept a job rather early in the process, at least before graduation. Once on the job, high scores on this scale are related to having received a raise in pay, usually within a few months of beginning employment.

High scores on this scale also indicate a tendency to believe, after graduation, that more emphasis should be placed on communication and group management skills in an MBA program.

Also, another interesting result relates high scores on the Achievement Orientation scale to self reported membership in the middle class.

Discussion

The Achievement Orientation scale seems to measure the tendency to engage in goal oriented behaviors. Certainly the two variables that comprise the scale are behaviors linked to a goal setting, goal achieving orientation toward planning. In developing the concept of the motive to achieve, McClelland (1985) indicated that the tendencies to set subgoals, and to take advantage of opportunities and obstacles were behaviors indicative of the need for achievement.
The relationship of the Achievement Orientation scale to the Investigative Personality type supports the notion that this scale measures a tendency to approach planning in a rational, straightforward manner. The Investigative Personality type as defined by Holland (1973) is characterized by the tendency to be rational, analytical and methodical. These attributes could translate into planning behaviors such as the tendency to thoroughly research options, to remain focused even in the face of distractions, and to generally be cautious in choice of goals and activities.

In addition to the rational, methodical approach to planning indicated by the tendency to be investigative, the Achievement Orientation Scale may well measure the degree to which a person focuses on a particular course of action. The scale measures the tendency to chart a course of action, complete with markers of progress. It also indicates the tendency to mentally anticipate opportunities and obstacles. It is expected that these abilities contribute to the ability to see clearly what one wants to accomplish, and what one needs to do to accomplish it.
There is an interesting link between the Achievement Orientation scale and self reported membership in the middle class. This result may be explained in terms of McClelland’s social motive theory (1985). This theory postulates that motives are by and large learned in the context of the social environment, and tend to reflect what is important to the social group. The Achievement Orientation scale is clearly related to the achievement motive; this could indicate that the motive, like the scale, is related to membership in the middle class. Interviews with students and graduates who tended to score high on the variables comprising the Achievement Orientation scale tended to support this notion. Often, these students were intensely focused on success, which they often defined as obtaining a good job with a good salary. They often described themselves as wanting what everybody else wants, and considered themselves to be middle class. Certainly the link between this scale, the achievement motive, and membership in the middle class is interesting and bears further study.

In the example of the Goal Oriented planner, "Sean" seemed to demonstrate some of the tendencies associated with high scores on the Achievement
Orientation scale. He considered himself a regular guy, middle class and striving for a good life. He knew exactly what he wanted to do, had charted a very clear course of action that would enable him to attain his goal, and was anticipating all that might help or hinder him in the process.

The Achievement Orientation scale relates to the degree to which a person can outline a clear path to a goal, and then engage in activities to enhance chances of attaining it. Certainly these abilities are powerful and desired characteristics of the planning process, and will do much to further a person on a chosen path. Still, there may be a detrimental affect on the planning process when this dimension is stressed to the extreme. The very qualities which ensure that the goal will be attained may also ensure that risks are not taken, visions are not expanded, and ultimately, that the person does not fulfill his potential. When an individual is single mindedly focused on one thing and one thing only, it is as if he standing on the shore, looking at a beautiful ship through a telescope. While he sees, very clearly, the lovely ship on the ocean, he fails to see the other
ships, the dolphins swimming, or the sky. His vision is keen, but is limited to that which he is focused on.

**Scale 3: Vision**

This scale is comprised of the code variables Flexibility, Time Orientation, and Clarity. All of these variables deal with how a person envisions herself in the future: adaptable or rigid, far-sighted or myopic, developmental or instrumental. As summarized in Tables 6.7 and 6.8, the Vision scale is associated with several personality and behavioral variables.

Results indicated that there is a negative correlation between the Vision scale and the Technology Management Skill Scale of the ESP. There is also a negative correlation with the Reflective Observation dimension of the LSI and a positive correlation with the Active Experimentation–Reflective Observation axis. However, these latter results must be interpreted with caution as they were not replicated in Study 2.

There are positive correlations between the Vision scale and both the Artistic and Enterprising Personality Types. The correlation with the Artistic total score is supported by correlations with Artistic
Activities, Competencies, and Occupations, as well as with Musical Abilities. The correlation with the Enterprising total score is supported by a positive relationship with Enterprising Occupations. One more personality variable is linked positively to the Vision scale: the Wants Affection dimension of the FIRO-B interpersonal styles measure.

In terms of behaviors, the Vision scale is related to behaviors during the MBA program, such as the tendency to shy away from joining clubs. High scores also indicated that the person scoring high on this scale believes her job to be related directly to her MBA education, but not to the specific area she concentrated or specialized in while in school. For example, a person may have specialized in Finance, but has taken a job managing a department in a retail firm.

The Vision scale relates in an interesting way to perception's of one's worth when compared to other MBA's. Those people scoring high on this scale tend to rate themselves as below average in comparison to other MBA's, both in general and in terms of specific skills.

Finally, the Vision scale is related to self reported membership in the upper middle class.
Table 6.7. Significant Correlations between the Vision Scale and Study Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study 1 (n=72)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology Management Skills</td>
<td>-.27</td>
<td>.022</td>
</tr>
<tr>
<td>Reflective Observation</td>
<td>-.25</td>
<td>.031</td>
</tr>
<tr>
<td>Active Experimentation-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reflective Observation Axis</td>
<td>.26</td>
<td>.028</td>
</tr>
<tr>
<td><strong>Study 2 (n=96)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artistic Total Score</td>
<td>.33</td>
<td>.003</td>
</tr>
<tr>
<td>Artistic Activities</td>
<td>.22</td>
<td>.048</td>
</tr>
<tr>
<td>Artistic Competencies</td>
<td>.24</td>
<td>.033</td>
</tr>
<tr>
<td>Artistic Occupations</td>
<td>.31</td>
<td>.006</td>
</tr>
<tr>
<td>Musical Abilities</td>
<td>.30</td>
<td>.006</td>
</tr>
<tr>
<td>Enterprising Total Score</td>
<td>.23</td>
<td>.038</td>
</tr>
<tr>
<td>Enterprising Occupations</td>
<td>.33</td>
<td>.003</td>
</tr>
<tr>
<td>Wants Affection</td>
<td>.26</td>
<td>.021</td>
</tr>
<tr>
<td><strong>Study 3 (n=38)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of Clubs</td>
<td>-.50</td>
<td>.034</td>
</tr>
</tbody>
</table>
Table 6.8. ANOVA Main Effects, Vision Scale by Study Variables (n=38)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sums of Squares</th>
<th>df</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Between</td>
<td>Within</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree Related</td>
<td>1.51</td>
<td>5.70</td>
<td>(1,24)</td>
<td>6.37</td>
</tr>
<tr>
<td>Conc. Related</td>
<td>3.65</td>
<td>8.85</td>
<td>(1,28)</td>
<td>11.53</td>
</tr>
<tr>
<td>Compare Self</td>
<td>2.04</td>
<td>10.80</td>
<td>(3,32)</td>
<td>2.02</td>
</tr>
<tr>
<td>Compare Skills</td>
<td>2.31</td>
<td>10.53</td>
<td>(3,32)</td>
<td>2.34</td>
</tr>
<tr>
<td>Social Class</td>
<td>1.97</td>
<td>11.01</td>
<td>(3,32)</td>
<td>1.91</td>
</tr>
</tbody>
</table>

Discussion

The three variables that comprise this scale, Time Orientation, Clarity and Flexibility, are all related to the way a person envisions the future. The scale seems to measure that dimension of the planning process related to a person's ability to envision alternative futures, different approaches to a goal, and even the breadth and depth of the future. These internal thought processes may well be related to the degree to which a person considers the future in simple vs. complex terms.
The person who emphasizes this scale in the planning process is likely to be imaginative, original, impulsive and adventurous. This intriguing combination of the Artistic and Enterprising Personality types could result in an approach to planning for the future that is highly visionary and idealistic. This person can see far into the future, can imagine many different possibilities and tends to think of goals as ways to chart progress and development, rather than as ends in themselves. In other words, the person emphasizing this scale as she plans will see the future as a never ending path that twists and turns. She will see herself as developing and moving toward a future that can not be defined, but that is related clearly to what she is doing today.

One of the students who participated in Study 3, "Sarah", seems to be emphasizing this dimension of the planning process. Sarah talked about her future much differently than did the other students in the study. Although she defined goals for herself, they were generally placed far into the future and were focused on self development. Sarah wrote about things she wanted to do, but placed far more emphasis on the vision of herself in the future:
My eyes are ultimately set to achieve a Ph.D. in expert systems and go into business consultancy and to create a name that would be heard reverberating around the world. 'To be or not to be'--that is not the question, for 'to be' it is. Only the depths of the future holds the answer to my destination.

Clearly, Sarah's vision of the future goes far beyond today, next week, or next year. Only 19 years old, Sarah sees herself many years hence, famous, and still working toward some unseen future. She sees the connection between what she is doing today, preparing in her senior year of college for a job as a systems analyst, and tomorrow's accomplishments. She does not see her immediate goals as ends; in fact, as she puts it, '"...that's not the end, for there is no end in achievement--and therefore the onward journey--the vision exists to be fulfilled.'"

Sarah seems to epitomize a person who plans with a focus on vision: she sees far into the future, recognizes the complexity inherent in her future and sees herself on a continuing path of development.

The Vision scale refers to the imagination, ambition and adventurousness a person brings to the planning process. A person emphasizing this dimension of planning may, like Sarah, be creative, idealistic
and even visionary. These qualities may well result in truly creative planning and ultimate success.

Still, the very strengths of this dimension of planning may also have a detrimental effect, if emphasized too strongly. Take, for example, Sarah, whose far reaching view of the future, flexibility, and focus on personal development may well end in great achievements. On the other hand, her vision could, conceivably, be based on self delusion and result in wasted time, misdirected effort, and shattered dreams.

In summary, the Vision scale is certainly an intriguing part of the planning process. If well developed, Vision can result in the ability to see far beyond today, and to be able to understand the complexity inherent in contemplating the future. The scale relates to how a person envisions the future: how far into the future she sees, how many views of the future she believes are possible, and whether she sees the future in terms of instrumental or developmental outcomes. Development of these attributes as abilities may well contribute to truly visionary planning.
Chapter Seven
Conclusions and Implications

The series of studies reported in this document were intended to shed light on the process of planning for the future. More specifically, the studies were designed to elucidate individual psychological factors and behavioral tendencies which affect the planning process and cause people to plan in different ways. The studies were based on the theories of social learning and social motivation, relying on the concepts of efficacy and need for achievement for direction and guidance in the search for individual differences in the ways people envision and plan for the future.

The studies began with an exploration of specific factors which might affect the planning process. Nine variables were identified, and they were classified according to their relationships to efficacy and achievement motivation. The classification system resulted in assignment of individuals to one of four planning styles, which were then analyzed in terms of a number of personality and behavioral variables thought to relate to planning.
The analyses of planning styles yielded encouraging results, indicating that there were indeed different ways of planning for the future, and that people engaging in the different planning processes would differ on a number of personal characteristics. Still, despite the encouraging results, it was thought that the methodology used to assign individuals to planning styles may have masked or confounded the results of the studies, and a different approach to the study of individual differences was explored.

In the final study, eight of the original individual difference variables were found to relate to one another in a meaningful way, forming scales representative of three dimensions of the planning process. These dimensions, Efficacy, Achievement Orientation, and Vision, provide a sound framework from which subsequent research can be designed. Each of the scales can now be explored in depth, to determine specific effects of thought processes and behaviors on the planning process. And, exploration of the scales will yield information on the degree to which the attributes inherent in each scale affect the outcome of
the planning process. Finally, the development of this model will serve to legitimize teaching the process of planning in an individualized fashion.
Suggestions for Subsequent Research

Three primary areas of inquiry will be addressed in the research designed to further the studies of individual differences in planning for the future. The first line of inquiry will address the relationship of the scales identified in the current work to the outcomes of the planning process, and the relationships of the scales to adult development. The second study will explore the effects of culture, occupation, and other demographic variables on the process of planning. The third avenue of inquiry will address the issue of furthering construct validation of the Efficacy, Achievement Orientation, and Vision scales.

Project 1: Longitudinal Study of Individual Differences in Planning for the Future

This study will be designed to address two basic questions. First, what is the relationship of the Efficacy, Achievement Orientation and Vision scales to the outcomes of planning? Second, do people’s planning processes and relative focus on the Efficacy, Achievement Orientation and Vision scales change over time?
This will be a longitudinal study. It is expected that the sample will consist of four groups of twenty people each. The groups will be heterogeneous with respect to gender, socioeconomic background, and occupation. They will be homogeneous with respect to age: one group will represent 18-22 year olds; another will represent 28-33 year olds; the third group will represent 38-43 year olds and the fourth group will represent people age 55 and above. These age ranges were chosen based on the assumption that during these years, people will often be reevaluating their lives and planning changes (Levinson, 1978).

The study will be designed to gather information about the participants’ planning processes, and in particular about behaviors associated with the Efficacy, Achievement Orientation and Vision scales identified in the current work. Initially, the participants will be administered the modified version of the "Thinking About the Future Questionnaire" (Boyatzis, 1987). Responses will be scored for the eight code variables used in the current research, and also scored for the Efficacy, Achievement Orientation, and Vision scales. Participants will then be interviewed, using a standard interview protocol.
developed to gather information on people's thoughts, perceptions, affect and expectations regarding the future.

On a yearly basis, these individuals will be contacted and asked to respond to a questionnaire which will address what they have done in the previous year, including information relating to their jobs, hobbies and interests, and relationships with others. This portion of the questionnaire will be standardized, possibly in the form of a behavioral checklist.

A second section of the interview will be individualized, and will be designed to solicit information pertaining to the plans as outlined on the original questionnaire ("Thinking About the Future"), and after year 2, about plans as outlined in the previous questionnaire. This section will deal with determining whether the person believes he is attaining his goals, and what factors have either helped or hindered this process. It will also focus on gathering information about changes in plans and the personal and situational factors that led to any changes.

The final section of the questionnaire will solicit information about current plans for the future. Like the original questionnaire, this section will ask
people to identify plans, specify their reasons for developing the plans, and ask them to consider circumstances that will help or hinder them in the future.

In the fifth and final year of the study, the participants will complete the questionnaire outlined above, and will also complete the "Thinking About the Future Questionnaire" for the second time.

To address the first research question, the questionnaires will be qualitatively analyzed to determine the "success" of each person's planning process. Of course, success criteria will have to be defined and standardized, and criteria applied to all interviews equally. Following this, original scores, final scores and average scores on the Efficacy, Achievement Orientation and Vision scales will be compared with success levels.

To answer the second research question, statistical analysis will be employed to compare the age groups on scale scores, behavioral tendencies and outcomes of the planning process. This analysis should yield information that will indicate first, whether different age groups tend to emphasize one scale or the other, secondly, whether this emphasis is demonstrated
by engaging in specific behaviors, and thirdly, if life stage is related to the outcomes of the planning process.

This study will yield additional information on the scales and their relationships to behaviors, thought processes, affect and perceptions. A qualitative analysis will be employed to identify behaviors associated with high and low levels of the scales, and statistical analysis employed to test these relationships.

It is hoped that this study will contribute significantly to the understanding of how people plan for the future. Relationships between the planning scales and outcomes are expected, as are relationships between age and stage in life and the method of planning. Although it will take several years to complete this investigation, the information it will yield should prove worthwhile.
Project 2: Affects of Cultural, Educational and Occupational Background on the Process of Planning for the Future

The research questions addressed in this study concern the extent to which ethnicity, nationality, occupation and educational background affect the process of planning. At the present time, the inquiry is envisioned as a two part study. The sample to be studied would include people of various ethnic, cultural, occupational and educational backgrounds. Sample size would have to be large enough that approximately 15 people were in each group, to facilitate statistical analysis.

The study would begin with participants responding to the "Thinking About the Future Questionnaire" (Boyatzis, 1987). The responses will be scored for the eight code variables as well as the Efficacy, Achievement Orientation and Vision scales. Questionnaires will be categorized variously by ethnicity, nationality, occupational and educational background and thematically analyzed to determine whether different variables affecting the processes of planning are evident in the different groups. The
results of this analysis will be compared to the initial study of individual differences.

The second stage of this inquiry will ideally involve a laboratory study. First, each of the participants would be given a planning task, to be completed under observation (direct, as well as video and audiotaping). The subjects will be interviewed prior to the actual planning process, and upon completion of the task.

The data will be analyzed qualitatively, to identify thought patterns and behaviors associated with the planning process, that may not have been evident in the original studies. This data will be interpreted with respect to the code variables and scales, and similarities and differences will be examined. The results of the thematic analyses will be analyzed statistically, to determine whether people who share certain ethnographic characteristics tend to plan in different ways. It is possible that the existing code and planning scale scheme will need to be modified to incorporate the additional information this study will yield.

It is hoped that this study will serve the primary purpose of identifying if there are individual
differences in the planning process that are determined by cultural occupational or educational background. Additionally, since this study focuses on individual planning alone, it could also serve as a control for a subsequent laboratory study of group planning processes.

Project 3: Replication and Extension of the Study of Planning Scales

This study would serve the purpose of furthering the understanding of the scales identified in the current research. Although analysis of the scales has yielded very encouraging and fairly extensive information as to their meaning in terms of the planning process, several questions should be addressed. First, it is necessary to determine whether results of the initial study can be replicated, especially in terms of the most important construct validation instruments such as the TAT and the ESP. In addition to this, the study would address the question of whether the process of planning is related to cognitive complexity. Finally, the study would provide data from which to begin establishing normative scales.
This would render the planning scales more useful in teaching people the process of planning.

This study is envisioned as sampling a rather large number of people, hopefully of various ages and cultural backgrounds. All of the participants would be administered the "Thinking About the Future" questionnaire (Boyatzis, 1987), the Test of Thematic Analysis and the Executive Skills Profile (Boyatzis & Kolb, in press). In addition to these, an instrument which measures cognitive complexity would be administered.

Data from the various tests and instruments would be analyzed statistically, to test hypotheses regarding the relationships of planning scales to study variables. In general, the first set of hypotheses would relate to the replication of results obtained in the initial study (e.g., the Achievement Orientation scale correlates significantly with need for achievement). A second set of hypotheses would be developed, linking the Vision scale with cognitive complexity.

Ideally, the data gathered from tests and instruments would be supplemented with interviews of a selected group of participants. These participants
would be selected based on high and low planning scale scores. Interview data would be analyzed to determine the thought patterns and behaviors of people scoring high and low on the scales.
Applications of the Planning Scale Concept

This study has possible implications for planning at both the individual and organizational levels. At the individual level, the findings of this study legitimize different aspects of the planning process, which can now be considered when discussing an individual’s goals and objectives. At the organizational level, a thorough understanding and respect for the three dimensions of the planning process may lead to more efficient use of key organizational members’ talents as they engage in strategically planning for the future.

In order to be a contributing, effective and productive member of any group, a person must feel as if she has an attractive future with that group, and as if there are legitimate ways for her to plan for the future she hopes for. In many organizations today, planning is equated with the goal setting process, and individual planning follows a straightforward pattern of identifying goals, setting objectives, and evaluating progress.

This method of planning, Management by Objectives (MBO) was made popular by Odiorne in 1978 and has been
implemented worldwide as a primary method of employee evaluation and development. Despite the widespread use and almost unilateral emphasis on this type of planning, it has met with limited and inconsistent success. In fact, anyone who has tried to teach the MBO method of goal setting to executives, supervisors or employees will attest to the difficulty inherent in first, getting the concept across, and second, in getting people to use the methodology over a long period of time.

The results of this study indicate that some of the problems associated with MBO may be due to the fact that it emphasizes only one aspect of the planning process, and literally excludes the other two. The traditional approach to setting employee goals has been to make sure that objectives are specific, moderately challenging, and easily evaluated. Surely, the person whose employee evaluation is determined by whether or not goals are met will try to make sure that his goals and objectives are manageable. By definition, "manageable" goals will not incorporate entrepreneurial behavior, risk taking or leadership. The person who approaches the future with a strong sense of self confidence and efficacy may, for practical reasons,
take the safe and accepted path rather than venture out and strive for something different, or better. Furthermore, this method of planning excludes visionary behavior simply because the goals that are set must be evaluated within a certain period of time, usually six months to a year.

All too often, the MBO process leaves people feeling incompetent and frustrated. For some people, the achievement orientation toward planning may not be paramount. They have a difficult time setting specific goals, and a more difficult time following the plan. Other people recognize that the goals set today will have little meaning in a year or two, and still others feel unable to express their creativity and courage within the confines of this system.

In any case, both efficacious and visionary behaviors are discouraged and in effect considered illegitimate when planning focuses only on setting and attaining goals. This could explain people's frustration with the MBO process, and could also lead to the conclusion that a planning process that focuses exclusively on goal setting and achievement may be detrimental to the individual and the organization as well.
The same problems evident in the style of personal planning called for by Management by Objectives are apparent in the planning processes employed by organizational leaders. All too often, emphasis is placed on the achievement oriented, goal setting approach to planning, and little attention is paid to daring, efficacious planning or vision. Countless hours are spent in meetings identifying clear objectives, time frames, and evaluation processes, and countless arguments are engaged in about which specific goals to focus on, exactly how to attain them, and how to evaluate success. Throughout this process, there is the tendency to discourage risk taking and to limit projection and forecasting to a vision of the near future. In essence, goal setting as the primary means of planning seems to pervade the board rooms and the executive suites of for profit and not for profit organizations alike.

Certainly setting goals and objectives are critical components of organizational planning, and an orientation toward achievement will often lead to successful attainment of goals. Obviously it is in the organization’s best interest for its leaders to know what we are doing tomorrow, how we will do it, and how
we will evaluate our performance. And yet, it is possible that this very useful process has, in many organizations, become so pervasive as to overshadow any other approach to planning, and possibly to interfere with successful strategic planning.

Strategic planning for the future begins with an understanding of the organization’s mission, and awareness of the organization’s history, present conditions, and a vision of the future. Successful strategic planning requires an accurate assessment of the external environment, and an accurate evaluation of the internal state of the organization. Ideally, all of these conditions will be met and organizational leaders can chart a straight path to the future.

In reality, strategic planning is often done in the absence of most of the above information. Over time, the mission of an organization often becomes unclear, and different individuals have different understandings of exactly what the mission actually is. Similarly, different people have different views of the organization’s past, present and future. Conditions in the external environment are almost by definition in a constant state of change: it is literally impossible to have all the available information about relevant
social, economic, and political conditions, not to mention information about the specific industrial environment. And, it is safe to say that most leaders (or organizational members, for that matter) do not have at their fingertips accurate and comprehensive information about the internal conditions of their organization.

Planning for the future under conditions such as these is extremely difficult and does not lend itself to simplistic processes. As organizational leaders attempt to outline the growth and development of their companies under conditions of constant change and uncertainty, it is apparent that the processes outlined by the goal setting methodology simply are not appropriate in every situation. Some plans, especially those that must be made before all the facts are known or in cases where change is imminent, simply can not be made using a rational, achievement oriented approach.

The current research suggests that planning may not be as a simple a process as identifying a goal, setting objectives and evaluating progress. It is possible the two other components of the planning
process discovered in these studies, efficacy and vision, are critical to successful planning, and in fact may be the elements which make planning under uncertain conditions possible.
Summary

The current research has addressed the issues faced by managers and employees as they try to plan for the future. The studies have indicated that while the goal setting approach is certainly a component of the planning process, it is just that: one component. This research indicates that there are two other components, equally important, that must be considered as well. A person's sense of efficacy, as well as how she envisions the future will also affect how she plans. Acknowledgement of these two factors as valid components of the planning process enable teachers and organizational specialists to go beyond the goal setting method of planning for the future, and to allow people to begin to consider the planning process in terms of personal strengths and weaknesses.

Although the scales seem to be related to relatively stable personality characteristics, it is proposed that there are skills associated with efficacious, achievement oriented, and visionary thought processes. It is also assumed that these skills can be taught, and that people can improve their ability to plan for the future.
In summary, this research has dealt with questions about how people plan for the future: what they do, what they think about, what they believe. The studies have served the purpose of legitimizing the concept of planning as an individualized process. The studies have also identified certain key behaviors that affect the planning process, and have helped to identify a framework that will enable continued inquiry and investigation of the individual processes of planning for the future.
REFERENCES


Boyatzis R. and Kolb, D. (in press). "Beyond learning styles to learning skills". Available from the Department of Organizational Behavior, Case Western Reserve University, Cleveland, OH 44106.


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Appendix I. Planning Code

The Planning Code explained in the following pages is designed to be applied to written responses to questions regarding an individual’s plans for the future. Application of the code begins with identification of a person’s primary goal. Once the goal is identified, nine categories are scored for the degree to which they are present in the response. The nine categories are Efficacy, Activity Level, Awareness, Subgoals, Opportunities/Obstacles, Flexibility, Time Orientation, Clarity and Affect.

Instructions for Determining the Primary Goal

The first step in applying the Planning Style is to identify the goal which is the most important to the respondent. This is done through application of three rules: Primacy; Order of Listing; and Relationship to Career.

Ideally, all three rules will apply. Primacy should be applied first and is sufficient cause for choosing which goal to score, even if the other two are
not applicable. If Primacy cannot be determined, choose a goal which is first in the Order of Listing and Related to Career.

I. Primacy
The goal can be identified as the most important one and/or is the focus of the interview. Usually there is an explicit statement indicating that the goal is more important than other goals or desires. Another indication of primacy is repeated mention of one goal and not others. Finally, primacy may be scored based on explicit repeated mention of the need to obtain skills associated with attainment of a goal.

Examples
"Obviously my primary concern is to learn the 'tools of the trade'..."

"In particular, it is my hope to achieve a much fuller understanding of the business world and what makes it 'tick'."
"Primary among my goals is to design and complete an MBA program that will allow me to choose rather than be chosen into a finite career."

"I plan to get the qualitative and analytical skills needed to become a successful financial analyst."

"...I plan to graduate from the WSOM MBA program with a bonafide degree and having gained the skills that I feel are necessary for me to be effective in the work that I will do."

Note: Two goals are mentioned here, and although obtaining a degree is mentioned first, "having gained skills" is mentioned repeatedly in the response and therefore meets the criteria for scoring under the Primacy rule.

II. Order of Listing

The goal is listed first in a series of goals or desires, or is the first goal elaborated upon in the response.
Examples
"The goals I have...my education and experience to become a better manager. I would like to use the next 2 years to decide on a career path..." (scored for "become a better manager").

"My intentions for the next 2 years include finishing my MBA degree at CWRU and an undergraduate degree in computers..." (scored for MBA degree).

III. Related to Career
The goal is related to a job or career path, indicated by an explicit statement relating the goal to a future career state of career advancement.

Examples
"I want to contribute to my company through the skills and experiences [of the MBA program]"

..."increasing my technical expertise in all areas of accounting...obtain a job in a large public accounting firm..."
Planning Code Scoring Categories

The following nine categories should be scored in relationship to the goal or future state which is identified as the focus of the interview. Each category consists of multiple levels which are exclusive. Responses should be assigned a single numeric score of one, two or three corresponding to the appropriate category level.

Efficacy

Level 3 Statement of sole personal responsibility for attaining the goal. There is no recognition or deliberate ignoring of factors that could be beyond individual control.

Level 2 Statement of some responsibility for maximizing the possibility of goal attainment. This includes recognition that some, but not all contingencies are under the control of the individual.
Level 1  Statement of reliance on outside sources for attainment of goal. There is indication that other people, circumstances, luck or the environment have greater impact than the self on success or failure.

Examples

Level 2  Statement of sole personal responsibility for attaining goal.

"The real obstacle to any goal is mainly one's self...It is up to the individual to overcome barriers and difficulties."

"I don't perceive there being any hurdles too high. If anything the unseens will cause the plan to be adjusted for the better."

Level 2  Statement of some responsibility for maximizing the possibility of goal attainment.
"It will be incumbent upon me to take advantage of career development activities so that I will go in the direction I feel I am best suited and most satisfied."

"I am excited about the opportunity to better myself...and the possibility of failure makes me somewhat nervous..."

**Level 1**  Statement of reliance on outside sources for attainment of goal.

"I hope that the WSOM can provide me with the necessary skill to take (and pass!) the CPA exam...I hope to have...survived my first few audits... The WSOM will definitely demand a high level of energy and motivation for me to successfully complete the master’s program."

"...the class will surely make me study very hard..."

**Activity Level**

The focus of this theme is action. "Action" is defined as a specific, observable behavior. If the person is not currently engaged in the action, she should
describe involvement in the activity using the active voice and definitive verbs: "I will" "I intend". Subgoals may be scored as actions. Non career related activities fall into the categories:

Sports, Athletic Activities
Extracurricular Activities
Aesthetics, The Arts
Family, Friends
Intellectual pursuits unrelated to the goal
Religious Activities

**Level 3** Actions in 4 or more of the categories above or, emphatic statement about including activities unrelated to goal or, more than three major career related actions are mentioned. "Major" means activities that are fields of study unto themselves.

**Level 2** Actions in one to three of the above categories are explicitly mentioned, in addition to career related actions.

**Level 1** Actions in the above categories are not mentioned.
Examples

Level 3 Actions in 4 or more of the categories above OR emphatic statement about including activities unrelated to career OR more than three major career related actions are mentioned.

"I would like to concentrate my studies on marketing...entrepreneurial...and make better use of my financial and accounting background."

"I do not plan to devote myself only to my studies...I plan to continue my extracurricular activities to their fullest..."

"...working part time on a new international Talmud youth organization...pursue my hobbies of hiking and music...continue this [research in Talmud] and publish some papers..."
"...be involved...in one club...maintain contact with all the activities provided by the school...join a local men's rugby union...maintain contact with all my associations back East..."

**Level 2** Actions in one to three of the above categories are explicitly mentioned, in addition to career related actions.

"I will be working in the WSOM admission office, doing minority recruiting..."

"...I plan to really get to know the city from its sports teams to its music and art."

"I plan on working out at the gym facilities at Case, and forming strong and lasting friendships with my classmates."
Awareness

Level 2  Explicit statement of values and/or interests which guide choice of goal or have impact on the process of goal attainment OR explicit statement of the need for personal growth and development.

Level 1  No mention of values or interests as factors which guide choice of goal or activities.

Examples

Level 2  Explicit statement of values and/or interests which guide choice of goal or have impact on the process of goal attainment OR explicit statement of the need for personal growth and development.

"Because I have an interest in nonprofit management, I will..."

"I plan on being able to develop tremendously as an individual"
"I’ve planned these things so that I can grow professionally....[and] remain sane and enjoy my education and development."

"The MBA program will also help me ascertain where my strengths and weaknesses are and hopefully I will be able to work on my weaknesses."

Subgoals

Level 2  There is mention of at least one critical accomplishment without which the goal can not be attained. Although not necessary for scoring, the word "through" may appear as a link between the goal and subgoal.

Level 1  Unrelated to goal or absent.

Examples

Level 2  There is mention of at least one critical accomplishment without which the goal can not be attained.
"I will gain these skills through internships, independent study and interaction with members of the working community in my field of interest."

"...obtain a solid summer job or internship that will help me in my networking efforts."

"College is a means by which I will begin a successful career as a financial analyst."

Level 1  Unrelated to goal or absent

"...a big objective is to make good friends...is an investment in the future"  (Note: the goal is to "learn the tools of the trade". There is no explicit mention of how friends will help accomplish the goal).

Opportunities/Obstacles

Level 3  Explicit statement of personal strength or weakness and or environmental opportunity or obstacle and statement about how to capitalize on or overcome.
Level 2  Explicit statement of personal strength or weakness or environmental opportunity or obstacle and no mention about how to capitalize on or overcome.

Level 1  No explicit statement of strengths or weaknesses, or recognition of opportunities or obstacles.

Examples

Level 3  Explicit statement of personal strength or weakness and/or environmental obstacle or opportunity and statement about how to capitalize on or overcome.

"...I just may not be able to cope with the course work...Workshops and labs for [help with] academic difficulties."

"The only two factors which may get in my way...are money (or lack thereof) and any difficulty in getting a job/work experience...I plan on getting a job...and/or
begging Mom and Dad for money...using the services offered by WSOM to their fullest."

**Level 2** Explicit statement of personal strength or weakness or environmental opportunity or obstacle and no mention about how to capitalize on or overcome.

"...lack of normal income...will be a major hurdle to overcome...I have not considered any outside sources of assistance..."

**Flexibility**

**Level 2** Expressed willingness or intent to change the plan if necessary. This can be expressed explicitly, or by a reference to a general field within which acceptable choices may be found.

**Level 1** Absolute commitment to primary goal and/or subgoals. There is no explicit reference to the possibility of modifying the plan.
Examples

Level 2  Expressed willingness or intent to change the plan if necessary.

"I feel that a good understanding of the private sector will benefit me greatly in whatever field I decide to enter."

"I...believe it is...within my general area of thinking."

Level 1  Absolute and rigid commitment to primary goal and/or subgoals.

"I don’t imagine any of the theory or goals will change, perhaps some of the avenues will twist and turn..."
Time Orientation

Level 2 The focus of the goal, subgoals and actions is on the period of time up until goal attainment AND the period after the goal has been reached.

Level 1 The focus of the goal, subgoals and actions is on the period of time up until goal attainment.

Examples

Level 2 The focus of the goal, subgoals and actions is on the period of time up until goal attainment AND the period after the goal has been reached.

"I will make business contacts which may be useful when working as a financial analyst."

"I hope to be able to look back on these questions and answers in five years and surprise myself that I had thought of these goals..."
Level 1  The focus of the goal, subgoals and actions is on the period of time up until goal attainment.

"The goals I have for the next two years..." (the remainder of the interview concentrates on what will be done and accomplished within two years)

Clarity

Level 3  The goal is described as a specific outcome or career/job role: "Specific" means a single unique outcome that is easily recognizable

Level 2  The goal is a set of activities, conditions or acquiring a general set of skills described as important for some later condition.

Level 1  The goal is described in broad vague terms or as a generic role.
Examples

Level 3  The goal is described as a specific outcome or career/job role: "Specific" means a single unique outcome that is easily recognizable.

"I plan to get the qualitative and analytical skill needed to become a successful financial analyst."

"Primary among my goals is to design and complete an MBA program..."

Level 2  The goal is a set of activities or conditions described as important for some later condition.

"...having gained the skills that I feel are necessary for me to be effective in the work I will do."

"...‘learn the tools of the trade’..."

"...develop better management and communication skills..."
Level 1  The job/career role is described in broad vague terms or as a broad category.

"...to become a better manager."

"...increasing my technical expertise in all areas of accounting."

Affect

Level 2  Expressed enjoyment, excitement, or positive affect regarding either the plan or the future.

Level 1  Neutral or negative affect regarding either the plan or the future.

Examples

Level 2  Expressed enjoyment, excitement, or positive affect regarding either the plan or the future.
"I'm quite pleased with my plan..."

"I am both excited and apprehensive."

"I am very happy that I have started the MBA program as I feel it is a positive step in the right direction."

Level 1 Neutral or negative affect regarding either the plan or the future.

"I feel an almost compelling fear that unless I grow personally I will not be of better worth to myself."

"I do not like having so many unanswered questions hanging over me..."
Appendix II.
Study 1 Results of Analysis of Variance
Means and Standard Deviations of Study 1 Variables by Planning Style

Table II.1. Means and Standard Deviations of Motives by Planning Styles (n=61)

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Table II.2: Means and Standard Deviations of Learning Styles by Planning Styles (n=61)

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Appendix III.
Study 2 Results of Analysis of Variance
Means and Standard Deviations of Study 2 Variables by Planning Styles

Table III.1. Means and Standard Deviations of the Allport, Vernon Lindsey Study of Values Scores by Planning Styles (n=88)

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Table III.2. Means and Standard Deviations of the Self Directed Search Personality Type Scores by Planning Styles (n=86)

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<td>15</td>
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<tr>
<td>Social</td>
<td></td>
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<td>8</td>
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<tr>
<td>Enterprising</td>
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<td>33</td>
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<td>13</td>
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<tr>
<td>Conventional</td>
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<td>27</td>
<td>11</td>
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Table III.3. Means and Standard Deviations of Learning Style

Inventory Scores by Planning Style (n=91)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Planning Style</th>
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<tbody>
<tr>
<td></td>
<td>Directional</td>
</tr>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Act. Exp.</td>
<td>33</td>
</tr>
<tr>
<td>Ref. Obs.</td>
<td>34</td>
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<tr>
<td>Abs. Conc.</td>
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<tr>
<td>Conc. Exp.</td>
<td>22</td>
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<tr>
<td>AC-CE</td>
<td>11</td>
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<tr>
<td>AE-RO</td>
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Table III.4. Means and Standard Deviations of Interpersonal Styles by Planning Style (n=88)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Directional Mean</th>
<th>sd</th>
<th>Goal Orient. Mean</th>
<th>sd</th>
<th>Action Orient. Mean</th>
<th>sd</th>
<th>Reflective Mean</th>
<th>sd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exp. Inclusion</td>
<td>4.64</td>
<td>1.7</td>
<td>4.63</td>
<td>2.5</td>
<td>4.22</td>
<td>1.8</td>
<td>5.05</td>
<td>2.5</td>
</tr>
<tr>
<td>Exp. Control</td>
<td>4.79</td>
<td>2.8</td>
<td>3.50</td>
<td>2.3</td>
<td>3.74</td>
<td>3.0</td>
<td>3.84</td>
<td>2.9</td>
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<tr>
<td>Exp. Affection</td>
<td>3.21</td>
<td>1.6</td>
<td>4.06</td>
<td>2.4</td>
<td>3.57</td>
<td>2.3</td>
<td>3.94</td>
<td>2.6</td>
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<tr>
<td>Want Inclusion</td>
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<td>1.5</td>
<td>4.63</td>
<td>1.3</td>
<td>3.65</td>
<td>3.1</td>
<td>3.32</td>
<td>2.9</td>
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<tr>
<td>Want Control</td>
<td>2.29</td>
<td>2.6</td>
<td>2.91</td>
<td>2.5</td>
<td>2.26</td>
<td>1.5</td>
<td>2.74</td>
<td>2.1</td>
</tr>
<tr>
<td>Want Affection</td>
<td>4.36</td>
<td>2.3</td>
<td>4.66</td>
<td>3.0</td>
<td>4.26</td>
<td>2.7</td>
<td>4.68</td>
<td>2.4</td>
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</table>
Appendix IV.
Predictive Validation Interview Protocol and Variable Categories

Table IV.1. Study 3 Interview Protocol

Section 1. Demographic Information

1. Name
2. Social Security Number
3. Date
4. Address
5. Telephone Number
6. Do you own or rent your home?
7. How long have you lived there?
8. What is your marital status?
9. How many children do you have?
10. How many years education do you have?
11. What is the last educational degree you received?
12. How many years education does your spouse have?
13. What is his/her most recent degree?
14. What is your current annual income?

<10,000  10-15,000  15-20,000  20-25,000
25-30,000  30-35,000  35-40,000  40-45,000
45-50,000  50-55,000  55-60,000  60-65,000

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15. Do you consider your parents economic status to be working, middle, upper middle or upper class?

Section 2. Behavior During the MBA Program

1. How many workshops did you participate in during the time you were enrolled in the MBA program at WSOM?
2. Which workshops did you participate in?
3. Did you have a summer internship?
4. Did you participate in study groups?
5. How often did you meet with a study group?
6. How many hours per week did you study?
7. Did you study mostly during the first third of the term, during the middle of the term, or during the last third of the term?
8. Did you seek remedial help from faculty or staff?
9. What was your GPA in your area of concentration?
10. What was your GPA overall?
11. What other work or employment were you involved in when you were attending the MBA program?
12. How would you rate your involvement in the Mentorship Program? (Active Sporadic Inactive Did Not Participate)
13. Was your mentor involved in a field related to your long term career interests?
14. When did you decide on an area of concentration?

Section 3. Behavior During the Job Search Process

1. When did you begin the job search process?
2. Outline the process you employed when looking for a job.
3. What were the methods you used to research the job market?
4. What kind of help or assistance did you seek when preparing your resume (Career Day, Resume Workshop, Mock Interviews, Other)?
5. How did you hear of your current position?
6. How many resumes did you send to prospective employers?
7. How many interviews did you attend?
8. How many offers of employment did you receive?
9. When did you accept employment?
10. Did you make a geographical move in order to accept employment? Why?
11. What were the reasons you accepted employment?
12. Which of these was most important to you?
13. How did you deal with obstacles when seeking employment?

Section 4. Current Employment

1. Employer
2. Address
3. Department
4. Position
5. Date hired
6. Do you work full time or part time?
7. How many hours per week do you work?
8. What are your major duties and responsibilities?
9. What kind of training or education have you sought since beginning work?
10. Have you been involved in any formal training or education since beginning work?
11. What kind of feedback have you received from your superiors?
12. Have you been promoted since being hired? Why?
13. When do you expect a promotion?
14. Have you received a salary increase since being hired? Why?
15. How many people do you interact with daily?
16. How many employees do you directly supervise?
17. Do you train employees? In what areas?
18. How long do you expect to be in your current position?
19. On a scale of 1 to 7, with 7 being high:
   - How satisfied are you with your job?
   - How satisfied are you with your career path?
   - How much is your present job related to your career goals?

Section 5. Perceptions of the MBA Degree
1. How did your degree help you get your current job?
2. How is your current position related to your areas of specialization in your MBA program?
3. Are there other WSOM graduates in your firm? What positions do they fill?
4. How would you say you compare with MBA’s from other schools:
   - In terms of skills and abilities?
   - In terms of self confidence?
   - In terms of promotability?
5. What do you believe are the general perceptions of Weatherhead graduates at your firm?
6. Which of your academic experiences are most often applied in your job?
7. Which of your academic experiences seem to be the most valuable in your job?

8. Since beginning work, how have your opinions changed about which skills and abilities are important to learn in an MBA program?

9. What do you feel you should have had more of in your MBA program?

10. What do you feel you should have had less of in your MBA program?

11. What are your plans for the future?

12. What WSOM resources would you like to take advantage of in the future:
   - Career development?
   - Continuing education?
   - Networking?
   - Other?

13. Are there any other comments you would like to make about your experience in the MBA program at Weatherhead School of Management?
Table IV.2. Variables and Response Categories

<table>
<thead>
<tr>
<th>Variable</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marital Status</td>
<td>Married/Single</td>
</tr>
<tr>
<td>Education</td>
<td>MBA/Enrolled PhD</td>
</tr>
<tr>
<td>Income</td>
<td>&lt;10,000 to &gt;70,000</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>Working/Middle</td>
</tr>
<tr>
<td></td>
<td>Upper Middle/Upper</td>
</tr>
<tr>
<td># Workshops</td>
<td>Numeric</td>
</tr>
<tr>
<td># Clubs</td>
<td>Numeric</td>
</tr>
<tr>
<td>Held Office in Club</td>
<td>1) Yes 2) No</td>
</tr>
<tr>
<td>Mentorship Program</td>
<td>1) No</td>
</tr>
<tr>
<td></td>
<td>2) Inactive</td>
</tr>
<tr>
<td></td>
<td>3) Sporadic</td>
</tr>
<tr>
<td></td>
<td>4) Active</td>
</tr>
<tr>
<td>Summer Internship</td>
<td>1) Yes 2) No</td>
</tr>
<tr>
<td>Part Time Work</td>
<td>1) No</td>
</tr>
<tr>
<td></td>
<td>2) &lt; 10 hrs./wk.</td>
</tr>
<tr>
<td></td>
<td>3) 10-20 hrs./wk.</td>
</tr>
<tr>
<td></td>
<td>4) &gt;20 hrs./wk.</td>
</tr>
<tr>
<td>Participation in Study Groups</td>
<td>1) No</td>
</tr>
<tr>
<td></td>
<td>2) When required</td>
</tr>
<tr>
<td></td>
<td>3) Once a month</td>
</tr>
<tr>
<td></td>
<td>4) 2-4 x per month</td>
</tr>
<tr>
<td><strong>Study Hrs. per Week</strong></td>
<td><strong>Numeric</strong></td>
</tr>
<tr>
<td>-------------------------</td>
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</tr>
<tr>
<td><strong>Study Schedule</strong></td>
<td>1) Early Semester</td>
</tr>
<tr>
<td></td>
<td>2) Mid Semester</td>
</tr>
<tr>
<td></td>
<td>3) End Semester</td>
</tr>
<tr>
<td></td>
<td>4) Balanced</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>Seek Help</strong></th>
<th><strong>Yes/No</strong></th>
</tr>
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<tbody>
<tr>
<td><strong>Choose Concentration</strong></td>
<td>1) Before Program</td>
</tr>
<tr>
<td></td>
<td>2) First Semester</td>
</tr>
<tr>
<td></td>
<td>3) Second Semester</td>
</tr>
<tr>
<td></td>
<td>4) Third Semester</td>
</tr>
<tr>
<td></td>
<td>5) Fourth Semester</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th><strong>GPA</strong></th>
<th><strong>Numeric</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>Start Search</strong></td>
<td>1) First Year</td>
</tr>
<tr>
<td></td>
<td>2) Third Semester</td>
</tr>
<tr>
<td></td>
<td>3) Fourth Semester</td>
</tr>
<tr>
<td></td>
<td>4) Post-Grad.</td>
</tr>
<tr>
<td></td>
<td>5) Did Not Search</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th><strong># Search Job Methods</strong></th>
<th><strong>Numeric</strong></th>
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<tbody>
<tr>
<td><strong>Network</strong></td>
<td>1) Yes 2) No</td>
</tr>
<tr>
<td><strong>Identify companies</strong></td>
<td>1) Yes 2) No</td>
</tr>
<tr>
<td><strong>Library Research</strong></td>
<td>1) Yes 2) No</td>
</tr>
<tr>
<td><strong>Help from Professors</strong></td>
<td>1) Yes 2) No</td>
</tr>
<tr>
<td><strong>Career Day</strong></td>
<td>1) Yes 2) No</td>
</tr>
<tr>
<td><strong>Resume Workshop</strong></td>
<td>1) Yes 2) No</td>
</tr>
</tbody>
</table>
Mock Interview

# Resumes Sent 1) Yes 2) No

# Interviews Numeric

# Job Offers Numeric

Date Accept Job Numeric

Moved for Job 1) Yes 2) No

# Hours Work/Week Numeric

On the Job Training 1) None

Seek Training 1) Yes 2) No

Received Promotion 1) Yes 2) No

Received Salary Increase 1) Yes 2) No

# Employees Supervised Numeric

Train Employees 1) Yes 2) No

Expect to Stay in Job 1) Yes 2) No

Job Satisfaction 1-7 Likert Scale

Career Satisfaction 1-7 Likert Scale

Job Related to Career 1-7 Likert Scale
<table>
<thead>
<tr>
<th></th>
<th>1) Don’t Know</th>
<th>2) Worse</th>
<th>3) Same</th>
<th>4) Better</th>
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</thead>
<tbody>
<tr>
<td><strong>Degree Related to Job</strong></td>
<td>No</td>
<td>Somewhat</td>
<td>Requirement</td>
<td>Requirement</td>
</tr>
<tr>
<td><strong>Concentration Related to Job</strong></td>
<td>No</td>
<td>Somewhat</td>
<td>Requirement</td>
<td>Requirement</td>
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<tr>
<td><strong>Compare:</strong></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>-Self with Other MBAs</td>
<td>Don’t Know</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-Skills with Other MBAs</td>
<td>Don’t Know</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>-Self Confidence with Other MBAs</td>
<td>Don’t Know</td>
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<tr>
<td><strong>Promotability with Other MBAs</strong></td>
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<tr>
<td></td>
<td>Worse</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Same</td>
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</tr>
<tr>
<td></td>
<td>Better</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Academic Experience Applied in Job

1) No
2) Courses, Extracurricular
4) Communication, Group Skills

Opinions Changed About What Is Important to Learn

1) No
2) More Comm. Skills
3) Other
Appendix V.

Study 3 Results of Analysis of Variance: Means and Standard Deviations

Table V.1. Means and Standard Deviations of School Behavior Variables by Planning Styles

<table>
<thead>
<tr>
<th>Variable</th>
<th>Planning Style</th>
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<td>Directional</td>
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<td>Workshops</td>
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<td># Interviews</td>
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<td>= Offers</td>
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<td>Supervise</td>
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<tr>
<td>Career Satis.</td>
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<tr>
<td>Job-Career</td>
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