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ABSTRACT

The research had four purposes: describe the concept of future orientation; develop measures of future constructs; determine the impact of background, labor markets, and job training on future orientations; and evaluate the validity of the measures as predictors of training outcomes and economic success. Data were collected from a sample of men in an institutional training program. Measures were constructed to tap four components of future achievement orientation: (1) a dispositional motive, (2) a capacity or tendency to plan, (3) the incentive value of future goals, and (4) expectations about the future. Four measures were selected on the basis of internal consistency, stability, and association with achievement related behavior. Five patterns of the motive, planning, and expectancy measures were recoded into a Future Pattern predictor. A Multiple Classification Analysis program was used to assess the predictive validity of the measures of individual components of future achievement orientation and the Future Pattern variable for (1) training outcomes, (2) employment and wage rate at different times, and (3) job search activity. Training outcomes were predicted by all component measures and the Future Pattern variable. The implications of the findings for training and manpower policy are discussed at length. (Author/NH)

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FUTURE ACHIEVEMENT ORIENTATIONS JOB TRAINING AND ECONOMIC SUCCESS

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ABSTRACT

FUTURE ACHIEVEMENT ORIENTATIONS, JOB TRAINING AND ECONOMIC SUCCESS

by

Robert Lyman Hubbard

Chairman: Joseph Veroff

This research had a fourfold purpose: (1) describe the concept of future orientation, (2) develop measures of future constructs, (3) determine the impact of background, labor markets and job training on future orientations and (4) evaluate the validity of the measures as predictors of training outcomes and economic success.

A sample of 165 men was interviewed in 1970 at one of four points in an MDTA institutional job training program in western Michigan; after application to, at the beginning of, near completion of and six months to a year after graduation from the program.

In 1972, 115 of these respondents were reinterviewed. Measures were constructed to tap four components of future achievement orientation: (1) a dispositional motive, (2) a capacity or tendency to plan, (3) the incentive value of future goals and (4) expectations about the future. Four measures were selected on the basis of internal consistency, stability and association with achievement related behavior. Five patterns of the motive, planning and expectancy measures were recoded into a Future Pattern predictor.

The initial measures of motive and planning components were not associated with background, previous employment, labor market or amount of training experience. Expectations increased with the amount of training completed. The outcome of training (non-enrollment, dropout, completion without placement and placement in a training related job) coupled with the pattern of labor market conditions upon entry and exit (good-good, good-bad, bad-bad) had a dramatic impact on the levels of all reinterview measures. Men who completed training but were not placed in a training related job suffered a substantial decrease in all aspects of future orientation, particularly if they graduated when the unemployment rate was high.

A Multiple Classification Analysis program was used to assess the predictive validity of the measures of individual components of future achievement orientation and the Future Pattern variable for (1) training outcomes, (2) employment and wage rate, in three six month periods before, immediately after, and over a year after training, and (3) job search activity. Training outcomes, particularly placement in a training related job were predicted to a large extent by all component measures and the Future Pattern variable. The Future Pattern variable had little association with employment immediately after training but had strong impact on employment over a year after training. Conversely, the pattern measure had a stronger relationship with wage rates prior to training than with wage rates in the long run. This predictor was also associated with job search after training and the self-report of finding a training related job.

Implications of these results for training and manpower policy were discussed. The connection of immediate activity and future goals seemed to be critical for the success of program graduates. Graduates who were placed in training related jobs not only did better economically but also maintained higher levels of future achievement orientation. Such findings demonstrate the necessity of an in-depth study of the effects of individual future orientations and the long term impact of success or failure on these orientations.

FUTURE ACHIEVEMENT ORIENTATIONS

JOB TRAINING

AND

ECONOMIC SUCCESS

by

Robert Lyman Hubbard

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DEDICATION

to

Catherine and Lyman

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INTRODUCTION

Different schools of psychologists have dramatic and fundamental conflicts concerning which temporal perspective provides the clearest insight into the underpinnings of human behavior. Most previous theoretical and empirical analyses have stressed the importance of either past experience or the immediate environmental determinants of behavior. However, neither framework has produced a completely satisfactory explanation of more complex processes, such as purposeful striving and personal development. Rogers (1964) acknowledged the use of concepts anchored in past and present time perspectives while citing their significant limitations.

> "For the behaviorist, man is a machine, a complicated but none-the-less understandable machine, which we can learn to manipulate with greater and greater skill until he thinks the thoughts, moves in the directions, and behaves in the ways selected for him. For the Freudian, man is an irrational being, irrevocably in the grip of his past and the product of that past, his unconscious.
>
> It is not necessary to deny that there is truth in each of these formulations in order to recognize that there is another perspective. From the existential perspective, from within the phenomenological internal frame of reference, man does not simply have the characteristics of a machine; he is not simply a being in the grip of unconscious motives: he is a person in the process of creating himself, a person who creates meaning in life, a person who embodies a dimension of subjective freedom. (Rogers, 1964, p 129)"

In contrast to approaches preoccupied with the past and present, personal growth theorists like Rogers insist that examination of the psychological future furnishes the key elements for the analysis of functional behavior. Allport (1955) stated these arguments most clearly.

> "To understand what a person is, it is necessary to always refer to what he may be in the future, for every state of the person is pointed in the direction of future possibilities (p. 12)...the most comprehensive units in personality are broad intentional dispositions, future pointed. These characteristics are unique for each person, and tend to attract, guide, inhibit the more elementary units to accord with the major intentions themselves...these cardinal characteristics are not infinite in number but for any given life in adult years are relatively few and ascertainable. This fact should encourage psychodiagnosticians to seek methods more appropriate than they now employ. (Allport, 1955, pp. 92-93)"

The importance of future oriented thought and action cannot be minimized. Maslow (1968) argued that functional behavior is impossible without some kind of orientation toward the future.

> "From Freud, we learned that the past exists now in the person. Now we must learn from growth theory and self-actualization theory that the future also now exists in the person in the form of ideals, hopes, duties, tasks, plans, goals, unrealized potentials, mission, fate, destiny, etc. One for whom no future exists is reduced to the concrete, to hopelessness to emptiness.... Striving, the usual organizer of most activity, when lost, leaves the person unorganized and unintegrated. (Maslow, 1968, p. 214)"

Two early studies demonstrated the impact of the future on thought and action. Lewin (1942) believed that the concentration of German Zionists on the future helped them resist the Nazi threat more successfully than those with more immediate concerns. Isreali (1935) reported that chronically unemployed workers had depressed future outlooks that were similar to the outlooks of hospitalized melancholia patients.

Despite the implications of these early studies, until recently, no systematic theoretical construction or comprehensive empirical investigation has been undertaken including concepts and measures of future orientations to explain behavior. Such programs are now being developed and expanded in the areas of learning theory (Nuttin, 1964), achievement and motivation (Raynor, 1969), and planning behavior (Miller, Galanter and Pribram, 1960). It is now imperative to evaluate the applicability of existing theory and research to real world situations. This dissertation is an attempt to use current theory and methodology to help predict long-term economic success and vocational adjustment, areas where future orientations should be of major importance. Specifically, this study focuses on the future achievement orientations of participants in an MDTA job-training program. Such programs were designed to offer a critical intermediate step toward the final goals of economic self-sufficiency and career development. The analysis of how individual future achievement orientations contribute to the success of program participants and how programs influence these orientations should result in a useful new kind of information for training program counselors and administrators. Recommendations based on these results should indicate how existing programs can be employed to take advantage of individual differences in future motivations and suggest possible

placement of participants in programs that will offer maximum benefits to those with particular levels or patterns of future orientations.

In order to develop viable recommendations for training programs and more general economic policies, the succeeding chapters address four main questions. The first question, examined in Chapter 1, is what is meant by the term future orientation. A number of viewpoints are discussed and an attempt is made to develop a general, comprehensive definition of the future orientation construct. Once the concept is adequately defined, the problem is how to operationalize the construct for the assessment of future achievement orientations. The various methods of measuring the construct and the evaluations of the measures are presented in Chapter 3. A third interest is the nature of background factors and events that influence the level of future achievement orientations. Bivariate and multivariate relationships of measures of future orientation with a variety of background and intervening variables are considered in Chapter 4. Finally, the most important question is how future achievement orientations contribute to long-term economic success and the attainment of career goals. The effects of future achievement orientation measures and their effects when other predictors are controlled are reported in Chapter 5. The final chapter summarizes the major results of the study and offers a number of possible implications for job training programs and general manpower policy.

CHAPTER 1

THE CONCEPT OF FUTURE ORIENTATION

Previous research and theory present no consistent or agreed upon conceptual definition of the future orientation construct. Therefore, it is crucial to precisely ascertain the meaning of the term future orientation before attempting to operationalize this construct. Six main conceptual problems are raised by a review of the literature examining the future perspective. The first involves the place of the future orientation construct in the analysis of the causes of behavior. Specifically, does the future function as a determinant of behavior; are future orientations a result of experience or is the association of future constructs with behavior and experience a more complex interrelationship? A second important question is whether future orientation is conceived of as a unidimensional construct or a concept that encompasses a number of relatively distinct components. If the latter is true, how do the components fit together into a meaningful pattern? Another concern is how the future perspective combines with past and present time perspectives. A closely related consideration is the nature of the connection of immediate activity and the attainment of long-term future goals. Fifthly, the constraints of reality on future plans and instrumental behavior must be examined. A final section gives a description of two models of future oriented behavior and discusses how they account for the conceptual problems raised by the preceding questions.

FUTURE ORIENTATION IN GENERAL CAUSAL NETWORKS

Results of studies including future constructs have generally been interpreted in three ways. Some reports conclude that future orientations function as an elicitor of effective behavior. Such inferences can be drawn from Teahan's (1958) study of academic achievement, Ezekiel's (1968) evaluation of Peace Corps performance, Lewin's (1942) examination of morale, and Douvan and Adelson's (1966) analysis of adolescent aspirations. Indirectly, all research using the McClelland, et al. (1953) operational definition of the achievement motive which includes a Long-term Involvement scoring category (Atkinson, 1958; Atkinson and Feather, 1966; Atkinson and Raynor, 1974) also supports this interpre-

tation. Other researchers view future orientation as an outcome of experience. Unemployment (Isreali, 1935) age, education and social status (Nuttin, 1964) and preparatory activity (Yayran and Festinger, 1961) have been found to be related to the level of future orientation. Fraisse (1963) believed that Teahan's data actually showed that academic achievement led to increased levels of future orientation, the opposite of the causal relationship Teahan proposed. On the other hand, studies of achievement-related behavior (Veroff, McClelland, and Marquis, 1971) and analyses of changes in the relationship between future orientation and adjustment in childhood compared to adolescence (Klineberg, 1967) suggest that future orientaiton may function as both a cause of behavior and an outcome of experience. More complex theoretical models such as Nuttin's (1964) conception of motivation and learning, Raynor's (1969) elaboration of Atkinson's (1957) theory of achievement motivation and Miller, Galanter and Pribram's (1960) discussion of information processing describe the future perspective as a moderator of behavior.

Viewing future orientation as a causal variable suggests that it functions as a relatively stable disposition. Studies reporting changes in future orientation as a result of experience indicate it acts more like a transitory expectation. However, such discrepant interpretations based on elementary analyses do not necessarily represent mutually exclusive alternatives. The multiplicity of measures may not have tapped the same aspect of future perspective. This implies that future orientation may not be a simple unidimensional construct.

COMPONENTS OF FUTURE ORIENTATION

An examination of measures used in previous research (see Chapter 3, pp. 40-42) and reports of independent dimensions extracted from more defined analyses (Ezekiel, 1968; Kastenbaum, 1961) support the idea that future orientation is actually a multidimensional construct. Four distinct elements of the future perspective appear to be encompassed by the term "future orientation": (1) a motive or disposition to derive satisfaction from future oriented thought and action, (2) a capacity and/or disposition to plan ahead and develop a map of paths to future goals, (3) the value or incentive of goals in the psychological future and/or level of aspiration, and (4) the expectancy or probability of attaining future goals, levels of aspiration, or continued opportunity

to strive for future goals. Each element is discussed more fully in the following sections.

Motive

A motive is generally conceived of as a propensity to derive satisfaction from certain kinds of activities or outcomes of activities. In the context of future orientations, satisfaction should be found in striving for long-term goals, delaying gratification, or planning ahead. The roots of these dispositional factors are thought to be developed in early childhood and should be relatively stable throughout life. Most experience will have little impact on the strength of the motive. However, long-term or traumatic impacts could lead to fundamental changes in strength of certain motives. Another possible characteristic of a motive is its generality. Any long-term striving, planning, or other future-related activity should provide a similar degree of satisfaction regardless of the extrinsic value of the object or the focus of the motivation.

A major example of a future dispositional motive construct is found in the work with achievement motivation. McClelland, et al. (1949) used long-term involvement in striving toward an achievement goal as a principal criterion for scoring presence of achievement imagery in TAT stories. Shrable and Moulton (1966) used both the long-term involvement and unique accomplishment scoring criteria as indicators of future achievement orientation. Allport (1955) proposed a more general intentional future disposition that functioned both as an energizer and organizer of action. Isreali's (1934) general drive toward future goals, Teahan's (1956) future imagery, Kastenbaum's (1961) movement from present to future, Ezekiel's (1968) demand for continued effort and Nuttin's (1964) relationship of age and goals in the life space also describe a more dispositional motive interpretation of future orientation.

Three other types of future-related constructs have been interpreted as dispositional elements comparable to motives. Le Shan (1952), Singer (1955) and Mischel (1958) conclude that delay of gratification is a basic motive. Time orientation may also have a motivational component including how time is perceived (Knapp and Garbutt, 1958) and the temporal

period in which thought and action is centered (Nuttin, 1964; Frank, 1939). Both Feather (1967) and Diggory and Murlock (1964) concluded that level of aspiration was a construct that was independent of expectancy and had functions that were similar to those of individual motives.

Thus, there is strong evidence that one of the primary components of future orientation is a disposition to derive satisfaction from future oriented behavior. The motivational effect appears to generalize to a variety of activities and seems to function as an instigator of a multiplicity of behaviors. Subsequent research and theory might concentrate on a general future motive component rather than tangential specific areas such as long-term involvement in achievement or delay of gratification. Another tack that Veroff, McClelland and Ruhland (1974) have suggested is that a motive component itself may have a number of dimensions. This would suggest that results from a variety of areas including achievement motivation, temporal orientation and delay of gratification need to be correlated into some kind of coherent conceptual definition of the future motive.

Planning

A second component of future orientation is planning, or foresight. This factor may be an innate capacity as Porteus (1965) suggests or an ability or disposition developed early in life. Another perspective is that with knowledge and opportunity planning ability can be learned. Douvan and Adelson (1966) cite the well-conceived, realistic plans for the future of most male high school students. Cloward and Ohlin (1960) and Miller, et al. (1968) discuss different behavior patterns as a function of opportunity rather than planning capacity. Miller, et al. (1960) suggest that a complete cognitive representation of plans is not necessary. A list of steps or instructions can be used to form a reliable concrete representation of plans. Other conceptions of an organizational component are found in the differentiation constructs proposed by Ezekiel (1968) and density and coherence factors derived by Kastenbaum (1961). All these reports stress the importance of individual differences in organizing the future.

Another set of studies uses organization more as an external moderator

of future oriented activity. In the Raynor (1968) research on future achievement striving contingency of steps in a path, length of path, perceived sequential probability, and perceived instrumentality are concepts based on organization of the future. With the exception of perceived instrumentality, all the variables are a result of experimental conditions rather than individual differences.

Miller, et al. (1960) present a detailed structure for implementing plans, but do not attempt to investigate how plans are formed or which plans are selected. They concentrate more on describing the information system through which plans and future activities are channeled. Other individual difference variables, particularly cognitive capacity, can be used as moderator variables to explain different relationships of plans and behavior. Shrable and Moulton (1966) used IQ scores as a moderator to explain different relationships of long-term involvement achievement imagery and competance in the two IQ groups. They concluded that the competence in ability factors provided an expectancy framework for the TAT responses. Raynor (1968) interpreted this finding as indicating an inability to cognitively represent the future. These interpretations also suggest that expectancy may be tied to planning.

The crucial question in developing a concept of the planning component is the effect of experience and/or prescriptive outline of the capacity to plan. While Porteus minimizes the effect of experience, Cloward and Ohlin (1960) and Miller, et al. (1968) stress the importance of developing realistic plans and the opportunity to carry out these plans. Miller, et al. (1960) advocate a prescriptive approach using a written outline stating each step and alternative outcomes. Since plans seem to be an important determinant it is imperative to find out if and how planning capacity can be maximized by any or all of these methods.

Incentive

In the strictest sense, a value or incentive for future orientation should be the opportunity for continued striving rather than goal attainment. The concepts of tendencies to self-actualize to some non-attainable ideal (Maslow, 1968) and to increase the length of future paths with each success (Raynor, 1968) come closest to this ideal incentive construct. However, in real behavioral terms most future goals have

extrinsic values which provide a proportion of the incentive. In this context future orientation is not a process which has value in itself, but functions as an instrument for the attainment of final multi-incentive goals.

A conception of goal-setting behavior is presented in the level of aspiration studies of Lewin, et al. (1944). In this framework it can be determined how much the incentive values of intermediate steps and the incentive value of the final goal contribute to the total incentive for future oriented striving. Both Feather (1967) and Diggory and Murlock (1964) find that goal-setting behavior has an independent component interpretable as an incentive. In related work Nuttin (1964) discussed the placement of primary motivational objects in the future and Kastenbaum (1961) found a factor of density of images in the future. The results of Grusec (1968) showed that varying the value of delayed rewards changed the patterns of preference for delayed rewards. Mahone (1960) and Moulton (1964) found the choice of achievement goals was affected by motivational dispositions.

One major conceptual problem for the incentive component is the determination of the relative value of intrinsic satisfaction derived from the mere act of planning, delaying or striving versus the extrinsic value of the object of future oriented activity. It may be, as Miller et al. (1968) and Cloward and Ohlin (1960) believe that future action has no incentive unless there is a tangible payoff. However, Grusec (1968) found that some subjects still chose delayed rewards even when the extrinsic value was the same as that for an immediate reward. It appears that the incentive of the action itself and the value of the objective of the action both contribute to the total incentive component. An important empirical and/or theoretical focus should be the investigation of effects of differential weighting of intrinsic and extrinsic sources of incentive on the final strength of motivation.

Expectancy

Expectancy is the easiest component to define. It is simply the perceived probability of attaining a goal. Raynor (1969) presents the conception of a multiplicative relationship of probabilities at initial, intermediate, and final steps in a path. Thus, the more steps or the lower the probability at a particular step, the lower the perceived

probability of eventual success. In the level of aspiration theory three measures are used: the expectancy of immediate performance, the final level desired after a sequence of performance, and the level of past performance. Using the level of past performance as a benchmark, discrepancy scores between performance and immediate expectancy or future expectancy can be obtained. Diggory and Murlock (1964) and Feather (1967) concluded that expected level of immediate performance seemed to be tied more strongly to actual performance level when performance was perceived to be based on skill.

Other studies have found a more general expectancy dimension such as a belief that the future will work out as expected (Gurin, et al., 1969). Ezekiel's (1968) concept of density is similar to this measure. Temporal orientations may either moderate the level of expectancy or be a component of expectations. Persons perceiving time as moving more slowly (Knapp and Garbutt, 1958) may have different perceptions of psychological distance, and thus have lower expectations of attaining future goals. Mahrer (1956) and Miller, et al., (1968) showed that changing the probability of attaining a desired delayed reward influenced tendencies to delay gratification.

The critical issue for the conceptualization of future orientation is the connection of estimates of immediate probability of success and the perception of chances for long-term success. Levels of expectancy for immediate success may not be the same of those for success in the long-run. The conceptual model of level of aspiration could offer a good elementary framework for more complex assessment of discrepancies and connections between these two dimensions of expectancy.

Configurations of Components

The results obtained in a number of studies indicate associations among all four components of future orientation. Measures of the achievement motive have been found to be related to preference for delayed rewards (Mischel, 1961), level of aspiration (Mahone, 1960; Moulton, 1965), length of contingent path (Raynor, 1968), expectancy (Atkinson and Feather, 1966), and time orientation (Meade, 1963). Planning has a relationship with expectancy (Raynor, 1968), tendency to defer gratification (Singer, 1955), and level of aspiration (Lewin, et al., 1944). Incentives and expectancies (Atkinson, 1964), delay of

gratification (Grusec, 1968), and time orientation (Hindle, 1951) have been found to be related. A number of studies reported associations between expectancies and delay of gratification (Mahrer, 1956), time orientation (Hindle, 1951) and level of aspiration(Lewin, et al., 1944). Temporal orientation and delay of gratification studies have a number of parallel results, including correlations with father absence, choice of delayed reward, stealing, low resistance to temptation, delinquency, and telling stories that are not projected into the future.

This overview of the studies of future orientation, achievement motivation, delay of gratification, temporal orientations, and level of aspiration indicates a number of convergent and divergent sets of results. Once the independence of components and the pattern of covariance between components and criterion behaviors are established a more refined model of the structure of future orientation can be developed. To determine the strength of motivation in future oriented behavior, all four factors must be taken into account and their interactive relationship determined. Components may combine multiplicatively; a low or zero level on any component will minimize the effects of the levels of other components. An alternate conception is an additive model where a high level on one component could compensate for low levels on the other. A more complex model would prescribe a threshold for each component or a particular profile to determine strength of future orientation. Past research does not indicate which model would be most valid. However, it does seem that some level of each component is necessary for effective future oriented striving. Highly valued goals, strong motives, and positive expectations, without any idea of how to work toward achieving the goal, would not promote effective action. Detailed plans, high hopes, and optimism provide no basis for action without some energizing force. All other components could be well-developed, but lack of opportunity to achieve goals would lower expectations to a point where action would be perceived as useless. These kinds of predictions may be derived more easily from an interactive model.

RELATIONSHIP OF PAST, PRESENT AND FUTURE PERSPECTIVES

Regardless of the nature of the configuration of the components, one key question is which of the three temporal perspectives have the most potent influence on the immediate levels of these components or patterns of components. Frank (1939) tried to resolve the question of the relative importance of past, present and future time perspectives for the prediction of subsequent behaviors.

> "The important question then arises whether the time perspective of the past enters into the time perspective of the future or more significantly, does the future reconstitute the past... the future determines the present, the present controls the past, but the past creates that future and so imposes its values on the present... it is a term we apply to our way of dealing with immediate situations, to which we respond with certain expectations, since that present is one step in the sequence of events; thus when our behavior is oriented or directed to that whole sequence it appears purposeful and intelligent...
>
> Past and future then are but two aspects of behavior, the past being the persistent modifications in the behaving organism and the future the controlling direction or pattern imposed upon the unfolding behavior according to those persistent modifications. (Frank, 1939, pp. 301-305)"

The concepts of time perspectives developed by Frank place particular emphasis on the present activity of the individual and how both past modifications and future directions influence expectations for that activity. The critical question is how these three elements combine psychologically to determine behavior. If the past completely determined future behavior as Freud maintains, or present environment shapes behavior as Skinner believes, there is little need for the study of future orientations. All behavior can be predicted by knowing the antecedents and/or current environmental reinforcers. However, as Freud, Skinner, and numerous other theorists agree, future behavior will not always be the same as behavior in the past or present. The past and present serve to define the range of aspirations and expectations for future action. Thus, past experience and present conditions provide the modifications Frank discusses and prescribe the limits of unfolding behavior. To refine prediction, we must know why, how, and in what directions these modifications have been made and can be made. Thus, information about future orientations permits a more complete under-

standing of the magnitude and direction of the stream of ongoing activities.

Fraisse's differentiation of time perspectives is similar to Frank's. In addition he introduces the idea that the present and future are connected by intermediate steps.

> "Our future perspectives depend on the possibility of escaping from a present determined by the situation or from the domination of the past. There is no future without at the same time a desire for something else and awareness of the possibility of realizing it... Desire grows from an unsatisfied need, but it does not develop unless we become aware through intermediate satisfactions of the fact that we can fulfill this need through our activity. (Fraisse, 1963. p. 174)"

It is critical to know not only the past determinants of the present psychological state but also the present expectations and aspirations for the future. Fraisse's fundamental point is that some expectancy of present activity leading to the future goals must be aroused if the future is to become psychologically important. To understand and predict activity, we must know how the sequence of goal directed activity is organized and the expectations of final attainment of the goal.

The concept of level of aspiration developed by Lewin, et al., (1944) stresses the importance of the connection between present expectations and aspirations for a future goal. In his discussion of the importance of a future time perspective for high morale, Lewin defined hope as a situation where:

> "sometime in the future, the real situation will be changed so that it will equal my wishes... Hope means a similarity between the individual's 'level of expectation' and his 'irreality level of wishes.' (Lewin, 1942, p. 48)"

The disparity between 'expectations' and 'wishes' is a question of the realistic attainability of the goal. One test of the realism of 'wishes' is how a person plans to go about achieving the desired goal or level of performance as Fraisse pointed out that:

> "the future only unfolds in-so-far as we imagine a future which seems to be realizable. (Fraisse, 1963, p. 172)"

The formation of a series of intermediate goals or steps provides a basis for the organization of realistic achievement striving and determines in large part the strength of motivation to attain the final goal.

> "Morale demands both a goal sufficiently above the present state of affairs, and an effort to reach the distant goal

> through actions planned with sufficient realism to promise an initial step forward. (Lewin, 1942, p. 65)"

CONTINGENT PATHS

The importance of intermediate steps is emphasized by Nuttin (1964). In his theoretical framework, the future is conceived of as being cognitively present, thus forming the primary motivational space. Activity that is connected to some ongoing stream of behavior creates a stronger motivation because it can be fitted more easily into the cognitive network engaging a variety of motivational factors. Based on this conception, he defined two types of behavioral situations. The first type of situation is an open path where immediate activity is the first response in a series of steps. There are other steps and goals that still need to be accomplished. In this type of activity, motivation and learning should be maximized because there is meaningful activity that links each actior to an ongoing stream of behavior. On the other hand, a closed path is "accomplished by giving only one response to a situation or stimulus." The only motivation for such a task would be the intrinsic value of the task. It would not fit into a larger cognitive network. Thus, motivation and learning in closed paths is minimized because no other sources of motivation are elicited. The isolated action has little value and thus arouses a lower level of motivation.

A similar conception of the importance of intermediate activity in the attainment of future goals was presented by Raynor (1969). Unlike Nuttin, Raynor concentrates on individual differences in energizing forces, and how future orientations affect these forces.

> "The characteristic differential effects of achievement-related motives tend to be accentuated when individuals conceive their present activity as instrumental to the achievement of both immediate and distant future success. (Raynor, 1969, p. 606)"

His conception of the connection of immediate activity with future goals was somewhat different than Nuttin's. He introduces the concepts of contingent and noncontingent paths. A path is defined as a contingent path:

> "when immediate success is expected by the individual to guarantee the opportunity to strive for future success, and immediate failure is expected to guarantee future failure. (Raynor, 1969, p. 607)"

A noncontingent path occurs:

> "either when immediate activity is believed to be the only step in a path, or when immediate success and failure are not expected to influence the opportunity to engage in future activity. (Raynor, 1969, p. 607)"

The advantage of such a distinction is that future orientation now becomes an important determinant of motivation in the immediate activity.

> "The concept of contingent path captures the idea that future success in an area of achievement skill is often dependent on more immediate success...
>
> The new proposals also imply that the effective length of a contingent path and the subjective probabilities of future success and failure influence the degree to which future orientation affects strength of present motivation. (Raynor, 1969, p. 608)"

Thus, Raynor emphasizes the importance of a guaranteed connection of present and future activity, length of path and probability of success at each step in the path, in addition to the open or closed nature of the task. The perceived certainty of this connection is a crucial element in the analysis of future orientation that has not been critically examined. One important element in this examination is the opportunity structure imposed by the social environment.

IMPACTS OF OPPORTUNITY STRUCTURE ON FUTURE ORIENTATIONS

An often neglected factor in the study of future orientations is the environmental impacts of the past and present on the present expectations of future success. First, the past environment (social, economic, psychological, political, etc.) has shaped the structure of present future orientations as Isreali (1935) found in his study of long-term unemployed workers. Secondly, the environment, in part, creates the present level of future orientation by the availability of particular consequences and the objective probability of obtaining a particular goal (Miller, et al., 1968). Finally, the environment provides the overall opportunity structure in which an individual functions (Cloward and Ohlin, 1960). To successfully cope with the opportunity structure, the individual's future orientations must conform to the demands of the structure. Lewin, et al. (1944), Mahone (1960) and Moulton (1965) all describe dysfunctional aspects of unrealistic aspirations. The interaction of future orientations and opportunity structure produces the resultant

behavior patterns. The relative importance, malleability, and desirability of the pattern of individual future orientations and opportunity structure in this interaction is a critical issue in the formation of social policy.

By changing the opportunity structure, patterns of individual future orientations can become more effective in planning for careers (Douvan and Adelson, 1966), developing a pattern of delaying bahavior (Miller, et al., 1968; Mahrer, 1956), and motivating striving for future achievement goals (Raynor, 1968). Maintaining a particular opportunity structure that limits effectiveness of future oriented striving may lead to delinquent subcultures (Cloward and Ohlin, 1960), use of future orientation as a defense against immediate failure (Veroff, et al., 1971), maladjustment in adolescence (Klineberg, 1967), unrealistic levels of career aspiration (Mahone, 1960), and a deep sense of depression (Isreali, 1935).

Very little effort has been directed toward reorienting individual future dispositions and expectations to conform to the opportunity structure. It is a generally-held belief in society that a high level of future orientation is desirable. However, the findings of Douvan and Adelson (1966) that 50% of high school students aspire to professional or semiprofessional occupations suggest that despite realistic, well-developed future orientations the opportunity structure often provides insufficient rewards for plans and striving. A critical social policy decision is whether to advocate creation and maintenance of high levels of future orientation in a socio-economic structure that cannot or will not provide an opportunity to consummate these motivations. Maintaining such levels will likely result in eventual failure and frustration for a great proportion of highly motivated people. To develop effective individual long-term striving, a multifaceted program is mandatory. Counselors must help clients acquire or maintain strong realistic future orientations, and develop a series of attainable intermediate goals. An educational effort must be undertaken to provide skills necessary to succeed at each step toward a long-term goal. Finally, a viable opportunity structure must be provided in educational, social, and economic areas.

THEORETICAL MODELS INCLUDING FUTURE ORIENTATION CONSTRUCTS

Two models have been proposed that appear to handle at least some of the major conceptual problems. The foremost dynamic quantitative model involving a future related construct was developed by Raynor (1969) in the area of achievement motivation. A more cognitive approach is presented in the Miller, Galanter and Pribram (1960) analysis of the structure of planning. Each approach has fundamental strengths and some major weaknesses. A more substantive framework may be derived from evaluation and comparison of the two models.

Future Achievement Motivation

Although long-term striving has always been a fundamental element of the concept of achievement motivation, recently it has received special attention as a crucial mediator of achievement behavior and a principal component of an elaborated theory of achievement motivation (Raynor, 1969). In the McClelland, Atkinson, Clark, and Lowell (1953) revised scoring system for n Ach long-term involvement in striving for achievement goals is a prinicpal criterion for inferring the presence of n Ach imagery.

> "Being a success in life, becoming a machinist, doctor, lawyer, successful businessman, and so forth are all examples of career involvement which permit the inference of competition with a standard of excellence...
>
> When rather routine and limited tasks or performances are shown definitely to be related to long-term achievement interests Achievement Imagery is scored... (McClelland, et al., 1953, p. 184)"

Thus, subsequent studies using the TAT n Ach scoring system include an element of future achievement orientation as an explanatory construct.

Atkinson (1957) formulated a quantitative theory of achievement motivation based on this operational definition of n Ach. The theory states that a motive to achieve success (M_S) interacts with the probability of success in achievement situations (P_S) and the incentive value of success (I_S), the inverse of the probability of success, of achieving the desired goal to create a tendency to succeed (T_S). In every achievement situation an opposing tendency to avoid failure (T_{AF}) is also created by the motive to avoid failure (M_{AF}) interacting with the probability of failure (P_F), the inverse of probability of success ($P_F = 1-P_S$), and the

incentive value of failure (I_F). Thus, the resultant strength of the two tendencies can be inferred by quantifying the components in a simplified algebraic statement of the theory, presented in Equation 1-1:

$$T_{S-AF} = (M_S - M_{AF}) \times P_S \times I_S \qquad (1\text{-}1)$$

Despite a wealth of empirical support, one disadvantage of the Atkinson model is that it does not account for a variety of more general and complex issues in achievement motivation research. Specifically, Raynor (1969) contends that:

> "The current theory of achievement motivation is a limited conception of the determinants of achievement oriented behavior in that it fails to distinguish between effects attributable to anticipation of (distant) future goals and the immediate consequences of activity. (Raynor, 1969, p. 606)"

Raynor attempted to revise the Atkinson model to provide a more refined explanation of future oriented achievement striving. He proposes that the motivation for an immediate task leading to a future goal is the summation of component tendencies to succeed at each step in the path to the future goal. If the subject is sure that each success at a step will guarantee the opportunity to try the next step (a contingent path), there will be a tendency to succeed for each task in the sequence. Summing all tendencies will give the total motivation for the initial task.

A number of assumptions are made to support this conception. First, Raynor assumes the motivation for each step in the contingent path contributes a tendency of approximately the same weight as the tendency for the initial task and the tendency for the final goal in the calculation of strength of motivation for the immediate activity. Secondly, Raynor assumes that the probability of success for each step is defined by a sequential multiplicative function. This function results in a decreasing probability of success for each additional step in the future. Thus, the longer the path, the lower the initial probability of success for going on to the final step in a contingent path. The third assumption is that the incentive value of each task perceived from the initial point is the inverse of the perceived probability at that point ($I_{R_1S_N} = 1 - P_{R_1S_N}$).

Employing these assumptions and simplifying algebraically gives Equation 1-2 which determines the strength of resultant motivation in the initial step of a contingent path.

$$T_{R_1 (S-AF)_T} = (M_S - M_{AF}) \sum_{n=1}^{N} \left((P_{R_1 S_n}) \quad (1-P_{R_1 S_n}) \right) \qquad (1\text{-}2)$$

$$\text{where } P_{R_1 S_N} = P_{R_1 S_1} \times P_{R_2 S_2} \times P_{R_3 S_3} \cdots P_{R_n S_n}$$

The principal advantage of the Raynor model over the Atkinson model is the prediction that, in a contingent path, subjects with $M_S > M_{AF}$ will have a stronger resultant tendency to succeed than (1) subjects with $M_S < M_{AF}$ in a contingent path and (2) subjects with $M_S > M_{AF}$ in a closed path task of the same initial probability. By knowing the levels of M_S and M_{AF}, the number of steps in a contingent path, and the probability of success at each step, the relative strength of total motivation to succeed at an initial task can be computed.

Structure of Plans

A detailed conception of how future oriented behavior might be organized is presented in the work of Miller, Galanter and Pribram (1960). Their major concern was the connection of thought and action, conceived of as Images and Plans.

> "The problem is how to describe how actions are controlled by an organism's internal representation of its universe. . . We wish to call attention to the fact that the organization does not exist . . . The configurations of behavior, however, tend to be predominantly temporal -- it is the sequence of motions that flows onward so smoothly . . . What we must provide, therefore, is some way to map the cognitive representation into the appropriate pattern of activity. (Miller, et al., 1960, pp. 12-13)"

The fundamental idea is that behavior is organized in a hierarchical fashion. The next step becomes one of determining how this hierarchical process operates. The concept of Plan is defined in this framework as

> "any hierarchical process in the organism that can control the order in which a sequence of operations is to be performed... Moreover, we shall also use the term 'Plan' to designate a rough sketch of some course of action, ... as well as the completely detailed specification of every detailed operation. (Miller, et al., 1960, pp. 16-17)"

Another concept of "Execution" is a key element for the understanding of organization of future orientation.

> "We shall say that a creature is executing a particular Plan when in fact that Plan is controlling the sequence of operations he is carrying out. When an organism executes a Plan he proceeds through it step by step, completing one part and then moving on to the next. (Miller, et al., 1960, p. 17)"

A final concept introduced by Miller, et al. was the Image which is a kind of conglomeration of past experience and provides the raw data for the development of future orientations.

> "The image is all the accumulated organized knowledge that the organism has about itself and its world. . . . It includes everything the organism has learned--his values as well as his facts--organized by whatever concepts, images or relations he has been able to master. (Miller, et al., 1960, pp. 17-18)"

The operational link between the Image and Plan is a feedback loop termed the Test-Operate Test-Exit unit. The input is tested and any incongruity is resolved by an action. Thus, Miller, et al. (1960) conclude that "the operations an organism performs are constantly guided by the outcomes of the tests." The sequence of action can be described as a series of TOTE units. Thus, future oriented action over a series of intermediate steps can be cast into this framework. This more complex organization of action and feedback is described more fully by Miller, et al. (1960) as a hierarchical structure.

> "More complicated Plans . . . can be similarly described as TOTE units built up of subplans that are themselves TOTE units. . . . The whole action is initiated as a unit, is controlled by a single Plan, yet is composed of several phases, each involving its own Plan, which may in turn be composed as subplans, etc. . . .
>
> If we consider complex Plans . . . then some general properties of such systems become apparent. . . .--Planning can be thought of as constructing a list of tests to perform. When we have a clear Image of a desired outcome, we can use it to provide the conditions for which we must test, and those tests, when arranged in sequence provide a crude strategy for a possible Plan. . . . (Miller, et al., 1960, pp. 37-38)"

It appears that we can conceive of each step in a future oriented path as a kind of TOTE unit. The success or failure at that step is the test defining the outcome. Failure produces an incongruity that must be resolved by successful performance or replaced by an alternative Plan. The concept of Image would seem to include both the definition of the ultimate goal of striving and the necessary intermediate steps. Thus,

this model provides a preliminary description of a structure of future orientation.

Evaluation of the Models

The test of the adequacy of any model is how well it handles the questions raised in the preceding sections of this chapter. Both models consider future orientation as an important part of the causal network. However neither conceives of the future as the principal energizer of behavior. For example, Raynor's dynamic model does not view future orientation as an independent causal factor but more as a mediator of the achievement motive, while motivational forces are not given much consideration by Miller, et al.

A primary focus of each model appears to be the planning component of future orientation. Raynor does not emphasize individual differences in plans preferring to regard the planning dimension of the future as a part of the activity rather than a characteristic of the person. A synthesis of the Miller, et al. cognitive approach with Raynor's dynamic model should provide a more comprehensive analysis of the function of plans in behavior.

The models do look at the future as a major factor in behavior. However, the Miller, et al. analysis also provides a framework for the investigation of the effects of past and present time perspectives on the future. The concept of Image is composed of all past experience and the TOTE feedback look is a method of processing information from the immediate environment. Raynor's concerns are limited to the present perceptions of contingent paths and probabilities of success.

Contingent paths are the cornerstone of the Raynor model. One deficiency in the model is that there is little exploration of the connection of alternative paths with the primary contingent path. It seems the contingent path is an inflexible, axial series of connected steps. Although Plans are sequential operations the TOTE concept gives some flexibility in the consideration and choice of alternative paths. Each step becomes a decision point and the TOTE process is the basis for the selection of the next activity. Integrating the idea of the process of choice into the Raynor model may help develop detailed predictions of more complex behaviors.

Neither model really considers the opportunity structure in much depth. Such consideration is critical for Raynor's idea of a guaranteed opportunity to continue on to future steps in contingent paths. Introducing variance in the certainty of continuing in contingent paths would drastically affect the predictions derived from the elaborated theory of achievement motivation. Again the TOTE feedback loop and the concept of Image proposed by Miller, et al. provide a means of revising the Raynor model to weigh the effects of perceived opportunity.

Generally both models satisfactorily explain some limited aspects of future orientation. Fortunately, where one model is weak, the other tends to complement it. Therefore, some combination of the dynamic and structural frameworks would tend to substantially increase the understanding of future orientations and the ability to predict long-run behavioral outcomes.

In order to synthesize these two approaches a series of carefully designed and rigidly controlled experiments need to be undertaken. At the same time broader field studies are necessary to determine generalizability and applicability of the models. The current study attempts to address all the major questions raised in this chapter, particularly the idea of components of future orientation and the importance of contingent paths, and at the same time consider some of their theoretical implications. In this way, the output of this research can be used as a basis for more definitive empirical research as well as applied to more practical public policy decision making.

CHAPTER 2

METHODOLOGY

The methods used in this research are designed and selected to: (1) develop measures of future achievement orientations, (2) determine what factors cause and/or affect these orientations, and (3) investigate the relationships of these orientations to job training outcomes and economic behaviors. Certain main points of the methodology require discussion. The type of program, demography of the sample, and characteristics of the labor market limit the generalizability of the results. Ideally, methodology for this type of research would be selected to eliminate extraneous sources of variance and permit unequivocal interpretations of the results. A single program in one labor market area is subject to a number of unforeseen impacts that cannot be eliminated by random sampling or statistical controls. Dramatic shifts in unemployment rate, labor market conditions upon entry and exit from the program, and subsequent mobility of respondents that could not completely be controlled in a quasi-experimental design produced main effects and interactions that had to be carefully considered. An effort was made to obtain as much relevant data as possible and to cover a broad range of possible sources of variance. The exploratory nature of this type of analysis precludes any simplistic or definitive answers. Rather, it offers a wide variety of interpretations and perspectives on the numerous factors influencing job training programs and manpower policy. The goal of the research is to generate relevant questions and provide guidelines for the further study of the major issues discussed in the introduction.

SITE OF THE STUDY

The respondents in this study were applicants, students, and graduates of the Muskegon Area Skills Center in Muskegon, Michigan. The site was selected primarily because of three factors. First, to maximize the possibility that individual motivations of the trainee would play a part in getting and keeping a job, a training program that did not guarantee employment after training was selected. Another reason

was the size of the Skills Center permitted us to draw adequate samples. Finally, the Muskegon area has a multiplicity of characteristics that permit us to draw generalizable conclusions.

Muskegon Area Skills Center

The Skills Center is a branch of the Muskegon Public Schools system servicing a major part of the western half of Michigan's lower peninsula, under provisions of the Manpower Development and Training Act. Recruitment for the Center is handled by the Muskegon office of the Michigan Employment Security Commission which also cooperates with the Center in the placement of trainees after completion of the program. During the first phase of the study five occupational skill courses: Auto Mechanic Mechanics, Production Machines, Welding, House Repair, and Building Maintenance were being taught for men. A Clerical Skills course was being given for women. A sixth course in Auto Body Repair was added for men during the first study and a Small Engine Repair class was added in 1971. In addition to the occupational skill courses, two types of Basic Education programs were in operation; one for English-speaking trainees and the second for a large Spanish-speaking population in the Muskegon Area. Those who had difficulty in basic English and mathematical skills were referred to the Basic Education course upon entry to the Skills Center. After instruction in the Basic Education course, trainees could move on to occupational skill courses that combined both classroom instruction and practical experience at the facilities provided at the Skills Center, and at outside work settings.

The Skills Center was strongly oriented to a one-to-one relationship with trainees. Five counselors were available at the Center to help the trainee adjust to the center and aid the trainee in preparation for taking a job after completion of the program. The Muskegon program also made a concentrated attempt to make training available to minority groups in the Muskegon community, particularly the Mexican-American population. The emphasis was on a comprehensive program to fit the diverse needs of the entire geographic region.

The Center began and was operated on a class-by-class basis until 1971, when the program was shifted to open-ended enrollment. Since that time an increased emphasis was placed on on-the-job training in most of

the classes. Changes were also made in application and placement procedures. The MESC established a satellite office at the Skills Center where applicants were initially interviewed and referred. This office also aided in finding placement. Due to a slackening demand in some occupational areas in Muskegon, an increasing effort was made to locate job opportunities in other states or other areas of Michigan.

Muskegon Business Community

The Muskegon community is a middle-sized, semi-industrial city surrounded by a number of primarily rural communities. It is a port on Lake Michigan, has a population of 45,000 in the city itself, and approximately 30,000 in the surrounding communities. Unemployment is often a major problem because of the concentration of basic industry. The average unemployment rate rose from 5.9 percent for the five quarters preceding the original study to 11.0 percent for the five quarters after the original study (see Table 2-1). This sharp increase in unemployment has important implications for the interpretation of relationships of personality measures with economic behavior, as will be discussed later in this report. Table 2-2 presents a general overview of the labor force and employment statistics for the Muskegon area in 1970, compared to 1972.

RESEARCH DESIGN

A different design was used for each phase of the study. A quasi-experimental design was employed in the initial phase of the study (Veroff, Hubbard, and Marquis, 1971). The follow-up study (Marquis and Hubbard, 1974) included a reinterview of respondents interviewed in the initial phase. Each design was selected for a particular purpose. Together they provide an elementary framework for investigation of major questions in this research. The combined quasi-experimental and follow-up design is presented in Figure 2-1.

The aim of the quasi-experimental design was to isolate effects of training on achievement motives and expectations. Instead of a longitudinal design, which might normally be used, a less expensive and less time-consuming quasi-experimental design was selected based on the principles developed by Campbell and Stanley (1963). In this

TABLE 2-1

AVERAGE UNEMPLOYMENT RATES PER QUARTER
FROM 1969 - 1972 IN MUSKEGON COUNTY

	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec
1969	6.1	6.7	5.4	4.8
1970	6.4	10.6	10.1	11.3
1971	11.3	11.1	11.7	9.8
1972	12.1	12.3	9.1	8.1

TABLE 2-2

SELECTED CHARACTERISTICS OF THE LABOR FORCE
AND EMPLOYMENT FOR MUSKEGON COUNTY, 1970 AND 1972

	Monthly Average for 1970	Percent of Labor Force	Monthly Average for 1972	Labor Force
Total Labor Force	62,000	100.0	59,400	100.00
Non-Farm Labor Force	61,500	99.0	58,900	99.1
Unemployment	6,000	9.7	6,200	10.4
Non-Farm Employment	55,400	89.4	52,700	88.7
A. Self-Employed	4,400	7.1	4,200	7.1
B. Wage and Salary	51,000	82.3	48,500	81.7
1. Manufacturing Industries	25,500	41.1	21,400	36.0
a. Durable	22,000	35.5	18,500	31.1
b. Non Durable	3,500	5.6	2,800	4.7
2. Non-Manufacturing	18,700	30.2	20,100	33.8
3. Government	6,800	11.0	7,100	12.0

From "A Trend Series for Muskegon County" prepared by the Michigan State Department of Labor

FIGURE 2-1

OUTLINE OF EXPANDED QUASI-EXPERIMENTAL DESIGN AND APPROXIMATE DATES FOR JOB TRAINING AND LABOR MARKET EXPERIENCE FOR GROUPS I - IV

	Jan-June 1969	July-Dec 1969	Jan-June 1970	July-Dec 1970	Jan-June 1971	July-Dec 1971
Group I						
Not enrolled			X_1	O_1 X_3	X_4	X_5 O_2
Enrolled			X_1	O_1 X_2	X_3	X_4 O_2
Group II			X_1	O_1 X_2	X_3	X_4 O_2
Group III		X_1	X_2	O_1 X_3	X_4	X_5 O_2
Group IV	X_1	X_2	X_3	O_1 X_4	X_5	X_6 O_2

O_1 - Initial Interview

O_2 - Followup Interview

X_1 - Pretraining job history

X_2 - Job training experience

X_3 - 6 months after job training or application

X_4 - 7-12 months after job training or application

X_5 - 13-18 months after job training or application

X_6 - 19-24 months after job training or application

cross-sectional design measurements were obtained for four groups of trainees at critical points in the training cycle; at the time of application (Group I), near the beginning of training (Group II), near the end of training (Group III), and six months after leaving the program (Group IV). According to Cronbach and Furby (1963), the results of such a cross-sectional design are comparable to those obtained for the same group in a longitudinal design.

The main purpose of the reinterview design was to provide a longitudinal follow-up of the first interview, and to indicate the predictive relationship of achievement orientations to economic behavior. However, the respondents' intervening experiences were not comparable. The most apparent difference was the amount of training experience and labor force participation between the interviews. Respondents interviewed at the beginning of the program had three to twelve months of training following the interview. Those initially interviewed shortly before graduation or six months to a year after completing training were in the labor force between interviews. Two other less apparent but more critical distinctions must also be considered. First, training resulted in four possible outcomes: an applicant did not enroll in training, a trainee dropped out of the program, a student completed the program but was not placed in a training or a graduate was placed in a training related job. A second distinction was the pattern of labor market conditions prior to enrollment and after termination from the program. Some students entered and completed training in 1969 when the unemployment rate averaged about six percent. Other trainees entered training when unemployment was about 6 percent but left the program after the unemployment rate almost doubled. A third group experienced 10 to 12 percent unemployment both before and after training. The possible effects of these three kinds of disparate experiences must be carefully weighed in developing data analysis strategies and in interpreting results.

SAMPLE

The initial quasi-experimental design required that the groups of respondents interviewed at each point in the training cycle have similar characteristics. Since there were a limited number of trainees who were

about to complete the program (Group III), an attempt was made to interview these trainees before they left the program. The mean number of weeks of training for this group was 26. Based on the composition of this group an attempt was made to match Groups I, II, and IV with Group III on age, race, and area of vocational training.

Trainees in the program less than two months and trainees entering the program during the study were included in the pool of respondents for Group II. A stratified quota sample selection procedure using strata of age, race, and program area was employed to match Group II with Group III. Group II had a mean of 8 weeks of training before the interview.

All graduates who had been in the labor market at least six months and no more than eighteen months composed the pool of respondents for Group IV. Within each of the strata, trainees were randomly selected as respondents in proportion to the strata frequencies for Group III. Letters explaining the purpose of the study and a return postcard were sent to all respondents. Attempts were made to locate all respondents. If attempts to locate a designated respondent were unsuccessful, a replacement was randomly selected from the same stratum. Respondents who could not be located, and those in the armed services or other institutions, were considered ineligible for the sample (see Table 2-3). These graduates were in the program for an average of 31 weeks.

The sample of applicants (Group I) was drawn from a list of over 200 applicants stratified on age. Applicants were sent letters and return postcards, contacted by phone, and given appointment for an interview at the MESC office. The first 45 respondents interviewed composed the sample of applicants because it was thought that these applicants were most interested in training and would be the most likely to enroll in training.

Overall, the results of the stratified sampling procedures indicated no major differences among the four groups in age or type of training (Veroff, et al., 1971). Two problems did occur. There was a higher proportion of Black respondents in Group I (29%) than in the other three groups (16%, 14%, 9%). This was a result of the unavailability of racial designations for the applicants. A second problem was a higher proportion of Mexican-Americans in Group III (21%) versus the other

TABLE 2-3

GROUP IV (PROGRAM GRADUATES) RESPONSE RATE INFORMATION

	White	Black	Mexican-American	Combined Sample
Total Sample	46	12	12	70
(-) Ineligible				
a. No address found	8	4	7	19
b. Institutionalized	4	0	0	4
Total Ineligible	12	4	7	23
Eligible Sample	34	8	5	47
(-) Non-interviews	3	5	3	11
Total interviews	31	3	2	36
Response Rate - Eligible Sample	91%	38%	40%	77%
Response Rate - Total Sample	67%	25%	17%	50%

groups (4%, 10%, 6%). This difference was attributed to a seasonal change in the number of Mexican-American enrollments, perhaps due to the increased demand for farm labor in the summer.

For the follow-up study an effort was made to locate and reinterview the 167 original respondents. A letter was sent to the last known address of each respondent with an address correction requested. If the respondent was not at that address, friends, neighbors, local stores, gas stations, or post offices were checked for any forwarding addresses or information about where to find the respondent. This location procedure had several possible outcomes. In most cases an interview was obtained with a respondent. Sometimes, an address was obtained that was over a 100 mile radius from the Muskegon area. No further attempts were made to interview these respondents due to the limited resources of the study. Other potential respondents were in the armed forces and not expected to come home on leave. These latter two outcomes form a clearly ineligible sample. A fourth result was that no address could be found for a respondent. A number of respondents were located but were never home when the interviewer called. A final outcome was a direct refusal to be interviewed.

The over-all results are similar to those obtained for a stratified random sample of graduates (Group IV) used in the quasi-experimental design (see Table 2-4). The location and interview rates are much higher in the follow-up study, compared to the first survey which used a quota sampling procedure. The reinterview response rates seem to be somewhat higher than most follow-up studies of job training programs (Goldstein, 1972). Table 2-4 shows that a somewhat lower percentage of minority group respondents were reinterviewed. Otherwise the follow-up sample appears to be representative of the original sample. Geographic mobility seemed to be a principal factor lowering the response rate.

DATA COLLECTION

In July and August, 1970, 167 respondents were interviewed to obtain data about achievement orientation and employment history. In addition, persons actually in the training programs (Group II and III) participated in a second session in which their actual achievement behavior in a

TABLE 2-4

REINTERVIEW RESPONSE RATE INFORMATION

	White	Black	Mexican-American	Combined Sample
Total Sample	120	30	17	167
(-) Ineligible				
a. In Armed Service	4	0	0	4
b. Moved From Area	9	4	4	17
c. Interviews Unusable	0	3	0	3
Total Ineligible	13	7	4	24
Eligible Sample	107	23	13	143
Non-Interviews				
a. Not At Home (6 or more visits)	3	2	1	6
b. No Address Found	12	5	2	19
c. Refusals	2	0	1	3
Total Non-Interviews	27	7	4	28
Total Interviews	90	16	9	115
Response Rate - Eligible Sample	84%	70%	69%	80%
Response Rate - Total Sample	76%	53%	53%	69%
Location Rate	90%	83%	88%	89%

controlled experiment was assessed. The follow-up interviewing conducted from January through June, 1972, included similar sets of questions about achievement orientations and a complete economic history since the last interview.

The interviewers were male, college students, aged 20-26, from the Muskegon area. Interviewers were given three days of training in the administration of both the questionnaire and the behavior measures. Each interviewer completed at least three practice interviews and three behavior assessment sessions with volunteers from the basic education courses at the Skills Center and volunteers at the MESC office. In the initial study in 1970, the interviewers were matched with respondents of the same race except for Group I (interviewed at the MESC office), where race of respondent data were not available prior to the interview. Two white interviewers were used and were randomly assigned to white respondents. One black interviewer interviewed black respondents and Mexican-American respondents were interviewed by a Spanish interviewer. Because of the larger proportion of whites in the sample and the geographical distributions, no attempt was made to match interviewer and respondent race in the following study. However, a black interviewer was assigned to the predominantly black section of Muskegon and interviewed a large proportion of the black respondents.

The initial data collection in 1970 was divided into three parts: (1) an interview questionnaire with projective and self-report measures of achievement orientations, (2) an assessment of experimentally controlled achievement oriented behavior, and (3) a complete history of work experience and income sources for six months. Both achievement orientation measures and job history were obtained in a personal interview format from all respondents. The total time of the interview was usually in the range of 70 to 90 minutes.

All the respondents in Group I were volunteers and came to the Muskegon office of the Michigan Employment Security Commission to be interviewed. Respondents in Groups II and III were interviewed at the Muskegon Area Skills Center. Trainees were encouraged to participate in the study by the Skills center personnel and time was made available during class periods for the interview. Respondents in Group IV were

usually interviewed in their home. Participation was voluntary, but the interviewer made a major effort to contact the respondent and obtain his cooperation in the research.

The follow-up interview in 1972 included original and expanded measures of achievement orientation and job history. All respondents were interviewed in their homes, or, in some cases, at their place of work. The length of the interview was similar to the first interview with a proportionately longer time spent on the job history, covering, in some cases, two years. Additional questions on job preferences and job-hunting techniques were also included in the follow-up interview.

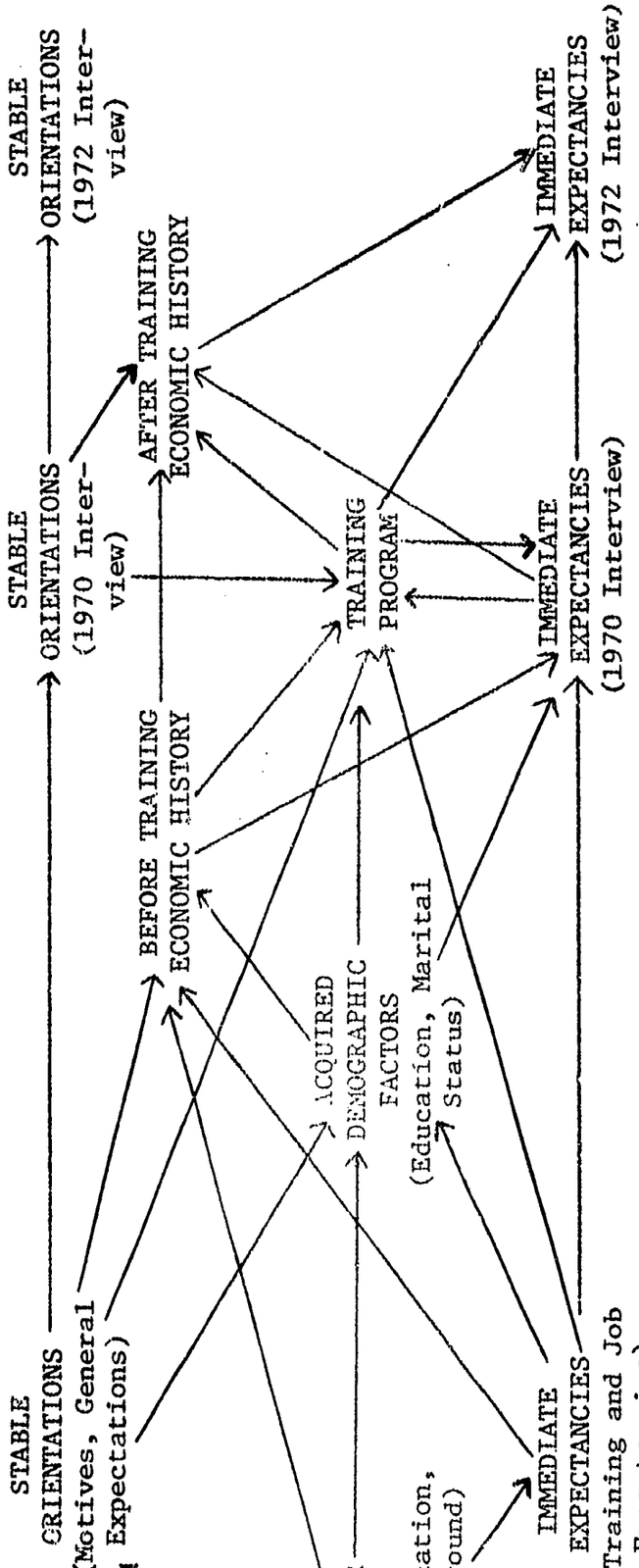
DATA ANALYSIS

Before moving on to the statistical methods used in the analysis it is necessary to establish some kind of conception of the general causal relationships among the diverse classes of variables considered in this report. A skeletal outline of the hypothesized causal network is presented in Figure 2-2. This model and the hypotheses presented below provide a viable framework for the discussion of some of the thornier problems in analyzing and interpreting the results of this study.

Permanent demographic factors, particularly age, race, childhood background, and father's education are obviously prior to other classes of variables. Stable aspects of future achievement orientations are believed to be formed in early childhood. The combined effects of permanent demographic factors, stable orientations and unmeasured immediate expectations, have an impact on acquired demographic characteristics such as marital status, education, and pretraining economic history. In addition to these factors, labor market conditions and expectations aroused by those conditions influence the motivations and qualifications for entry to the training program. At this point in the causal framework, the first interview was conducted in 1970. Demographic characteristics, pretraining economic history, and training experience may have an effect on the 1970 interview responses, particularly more immediate expectations. The stability of dispositional components of future orientation would suggest that these components are not a result of pre-interview experiences and may have, in part, determined educational and economic attainments prior to the interview. For logical simplicity,

FIGURE 2-2

SYSTEM OF CAUSAL RELATIONSHIPS



constructs measured in the 1970 interview will only be used as predictors of subsequent events such as termination status and posttraining economic success.

The follow-up interview provides two kinds of dependent variables. The first includes the indices of economic success, job search activity and training outcomes. A second is a reassessment of the levels of future achievement orientations. Any change in these orientations should be directly attributable to intervening events and measurement error. The replicability of patterns of internal consistency and test-retest coefficients will provide the basis for conclusions regarding the effects of differential experiences on the reinterview measures.

The design of the current data analysis is intended to provide some clearer answers to the questions raised in the introductory section of this chapter. An attempt is made to include a number of controls and analysis techniques that overcome the limitations of previous research. This analysis should provide a sound framework for the construction of more refined hypotheses and more definitive research designs. One type of analysis strategy that has the required capabilities is Multiple Classification Analysis (Andrews, Morgan, Sonquist and Klem, 1973). This program permits the use of categorical predictors, derives coefficients of bivariate (eta^2) and multivariate ($beta^2$) effects for each predictor, calculates mean values of the dependent variable for each category of the predictor, adjusting for effects of other predictors, and provides a method of assessing the marginal predictive power of a predictor.

The bivariate effects of each predictor is shown by the eta^2 coefficient, interpretable as the percentage of variance explained by a single predictor. The significance of this bivariate effect is calculated from a simple one-way analysis of variance. Multivariate effects take into account the other predictors and are indicated by the $beta^2$ coefficient. This coefficient requires a careful interpretation.

> "The beta statistic is useful as an approximate measure of the relationship between a predictor and the dependent variable while holding constant all other predictors, i.e., while assuming that in each category of the predictor in question, all other predictors are distributed as they are in the population at large . . . p. 34.
>
> The rank order of these betas indicates the relative importance of the various predictors in their explanation of the

dependent variable if all other predictors were 'held constant' . . . p. 73 (Andrews, Morgan, Sonquist and Klem, 1973)."

In order to assess the marginal effects of a predictor, for instance a future achievement orientation measure, an MCA analysis is first conducted using only the best set of demographic, job training, labor market and job history predictors, then another MCA is run adding the future measure. The marginal effects of adding a single component of future orientation are indicated by the squared partial correlation, calculated by equation 2-1:

$$\text{Squared partial correlation} = \frac{R^2_{\text{best set plus future measure}} - R^2_{\text{best set}}}{1 - R^2_{\text{best set}}} \qquad (2\text{-}1)$$

where R^2 is equal to the squared multiple correlation of the predictors included in the MCA with the dependent variable.

The test of significance of the partial correlation is a very conservative one since the effects of all other predictors are removed from both predictor and dependent variables. If future orientation is a determinant of one of the predictors that was removed (i.e., education, pretraining employment or job training outcome) this indirect effect is not reflected in the squared partial correlation. Therefore this index is very likely an underestimation of the overall importance of future orientation compared to the overestimation of importance derived from the eta^2 coefficient.

Two complex factors must be taken into account in all statistical analyses of economic outcomes; changes in labor market conditions, and the status of the trainee at the termination of training. These factors appeared to have considerable influence on the major training and economic outcomes (Marquis and Hubbard, 1974). Ideally, effects within each possible combination of labor market change and termination status factors should be analyzed. However, the small sample size in the current study precludes extensive analyses of this type. The MCA program handles a problem of this type quite well. Two categorical variables, Termination Status and Date of Termination, were created to assess the effects of the training program and the different patterns of unemployment rates on entry and exit from the program (see p. 29). A more

difficult problem occurs when these two variables appear to have an interactive effect on a dependent variable. In cases such as this, a Status-date pattern variable was built to help evaluate the combined effects of these two factors. Thus a major advantage of issuing the MCA program is its ability to deal with these more complex nominal predictors.

One disadvantage of the MCA program for a small sample is the rule of thumb requirement that the number of cases exceed ten times the degrees of freedom (number of categories in all predictors minus the number of predictors). The limited sample size in the present analysis required the collapsing of categories and the selection of predictors with little or no missing data. To permit a more logical interpretation of the prospective validity of predictors especially future orientation measures, the sample for each analysis was restricted to respondents interviewed prior to particular outcomes such as termination status or post training employment. Thus, respondents who graduated from the program prior to the initial interview (n=35) were not included in a number of analyses. Although this conservative approach may yield fewer dramatic results, it should generate findings that can be clearly understood and confidently utilized.

CHAPTER 3

MEASURE OF FUTURE ACHIEVEMENT ORIENTATION

A variety of methods and techniques have been used to measure future orientation types of constructs. In one line of research, future orientation is measured directly. Other studies of delay of gratification, planning, level of aspiration, and temporal orientation include measures that indirectly tap certain aspects of future orientations. A third tack is that future orientation is a specific part of a more general concept, such as achievement motivation.

Israeli (1934) proposed three main methods of measuring future orientation: (1) assess the relative concern with past, present, or future, (2) predict a future history or future autobiography, and (3) determine affect for future events. Teahan (1956) coded the content of written stories in response to verbal cues and three TAT pictures. Kastenbaum (1961) suggested four dimensions of future time perspectives: (1) How far ahead does it extend? (2) How densely populated is the future? (3) How organized or coherent is the outlook? and (4) To what extent is the person moving from the present into the future? The various dimensions were measured by (1) a story completion test, (2) sequence arrangement task of important events weighted by the difference of the age at which the event would occur and how important the event was, (3) autobiographical questions: Who are you? Who will you be? and, How many events do you foresee? and (4) a test of time metaphors consisting of forced-choice items describing how time looks similar to that used by Knapp and Garbutt (1958). Ezekiel (1968) used similar conceptions, coding fictional autobiographies of Peace Corps trainees for (1) differentiation "complex, detailed mapping of the future," (2) demand "description of a life perceived by the respondent to demand long-term continued effort," and (3) agency "description of the future self as prime agent in determining the course of the future life." Nuttin's (1964) measurement consisted mainly of a sentence completion test for motivational objects and their placement in present or future. The strength of future orientation can be inferred from the person's current position and the placement of his primary goals in the life cycle.

A number of studies in a variety of areas have used numerous measures of future related constructs. A variety of questions have been used to elicit the expected final goal or level of aspiration. Frank (1935) placed these questions into three categories: (1) wishful level, (2) the level expected, or (3) the level least satisfied with. Lewin, et al. (1944) developed a measure of discrepancy score that was the difference between the past performance of the subject and an expected level of performance. Raynor (1968) suggested that cognitive capacity to visualize future goals and realistic paths to those goals may account for different patterns of association between achievement imagery and competence in groups with low and high IQ scores. Porteus (1965) contends his maze test measures foresight and a capacity for planning. Researchers investigating temporal orientations have used preference for time metaphors and bias in reporting dates of past events (Knapp and Garbutt, 1958), time span covered by imaginative stories (Le Shan, 1952), and direct estimates of elapsed time (Hindle, 1951; Meade, 1966) to assess perceptions of time as an aspect of psychological distance. The delay of gratification pattern has been assessed by a wide range of techniques; including Schneider and Lysgaard's (1953) series of 28 questions about choices to delay, Beilin's (1956) coding of delay in open-ended questions about plans for the future, and Singer's (1955) evaluations of fantasy responses, Rorschach perceptions of movement, responsiveness to autokinetic phenomena, and direct observations of motor activity. Mischel's (1958) program of research was based on a scale measuring the preference for an immediate reward of a small value or a larger delayed reward. All these measures seem to tap some important aspect of a dimension of future orientation.

Although long-term involvement in achievement striving is one of the three criteria for scoring presence of achievement imagery (McClelland, et al., 1953), few studies have included long-term involvement as an independent predictor. Rogers and Neill (1966) attempted to develop a set of sentence completion items to measure achievement motivation for groups of Columbian peasants. Half the items seemed to indicate a present instrumental orientation and the others appeared to suggest a future orientation. Veroff, Hubbard, and Marquis (1971) expanded a set of items originally developed by Atkinson and Moulton

(1970) into measures of a number of dimensions of achievement motivation, including a scale of seven items reflecting future orientations. Raynor (1968) has inferred the connection of immediate and future actions from ratings of Perceived Instrumentality; the importance of a particular activity to the achievement of future goals. Most of these measures focus on the energizing or motive component of the future.

Four dimensions of future orientations are represented in these studies; (1) a motivational or energizing component, (2) a capacity to plan or perceive the future, (3) values of future goals, and (4) perceived possibilities of attaining future goals. Unfortunately, no one study has included a measure or a group of measures that tap all four of these dimensions. These studies do indicate that all four dimensions of future achievement orientation can be quantified in some way. In order to find a measure of a general future orientation and/or measures of the various components, it is preferable to employ more than one kind of measure for each construct. This multi-trait multi-method type of design (Campbell and Fiske, 1959) indicates the degree to which variance is attributable to the trait or the method. The purpose of this chapter is to describe three methods of measuring future achievement orientation and/or the four possible components of this orientation. In the succeeding sections of this chapter these measures will be evaluated, both to find one or two good single measures of each construct and then to develop composite indices which can be utilized as predictors or dependent variables in later analyses.

METHODS

Three distinct methods were used in the current research: (1) projective TAT stories, (2) semi-projective sentence cues, and (3) scales composed of two alternative, forced-choice items (see Appendix A). Each measure was designed to assess levels of future achievement orientations but each had unique methdological characteristics. TAT stories gave a relatively open-ended type of question indicating salient future achievement concerns in an unstructured response. The semi-projective question explicitly created a future perspective and tapped predominant motivational themes for the future. The third technique was the structured forced-choice format presenting a choice of future oriented responses

versus a present or past alternative. Within each method, an attempt was made to derive individual measures of the motive, expectancy, and planning dimensions[1] of future achievement orientations.

Projective TAT Stories

The projective assessment was introduced with a warm-up story (Veroff, et al., 1971) designed to increase the respondent's ability and motivation to give complete, codable protocols. The story requires a number of responses of increasing length. Reinforcement (Marquis, 1967) is used after each satisfactory response. Following the warm-up, the first of two TAT pictures are presented: #2, two men at a printing press, and #52, a man working late at night (Atkinson, 1958). The respondent is asked to tell a complete story about each picture. The interviewer followed the guidelines and used probes suggested by Veroff, et al. (1960). Responses were recorded verbatim and acceptable responses were reinforced with neutral approval statements (O.K., Hm Hmn, I see, etc.). After the second picture, two sentence cues were presented. The first sentence (Ray works much harder than most people) was from the French Test of Insight (French, 1958). The second (Phil finds himself at the top of his high school class) is a revision of an item in the Fear of Success measure (Horner, 1968). The same guidelines and probes that were used with the pictures were used with the sentence cues. The four protocols were coded for type of achievement imagery, subcategories, and the total n Ach score by an expert scorer (Atkinson, 1958). Three indices were derived from this coding.

Long-term Involvement represents a motive or dispositional aspect of future orientation. One of the three criteria used to indicate the presence of achievement imagery in TAT protocols is that "One of the characters is involved in attainment of a long-term achievement goal (Atkinson, 1958, p. 183)." Work by Raynor (1968) and Shrable and Moulton (1966) has indicated that differentiating Long-term Involvement from other types of imagery leads to more precise predictions of future

[1] In achievement motivation research, it is assumed that the incentive value of an achievement goal is the inverse of the probability of obtaining the goal. Therefore, it is not necessary to measure incentive independently.

oriented achievement behavior. An index of Long-term Involvement (LTI) achievement imagery was the number of protocols that were coded for presence of Long-term Involvement imagery. All other responses, whether scored for other achievement criteria, task imagery, or unrelated content areas were not included in the Long-term Involvement index. Two expert coders[2] agreed on the presence or absence of Long-term Involvement in over 95 percent of the protocols.

An indication of planning for future goals is the perception of intermediate activities that are necessary to attain a future goal. An instrumental act is defined as any explicitly stated activity independent of the outcome of the story that is directed toward the attainment of the achievement goal (Atkinson, 1958). An Instrumentality index was based on the coding of instrumental activity in protocols with achievement imagery. The total number of stories with instrumental acts was used as the Instrumentality index.

The expectancy dimension of future orientation seems to be similar to anticipation of attainment of future goals. An Anticipatory Goal in the n Ach scoring system is any statement of perceived positive or negative ... omes of achievement activity (Atkinson, 1958). A Block, a stated obstacle to goal attainment, also gives some indication of expectation for success. Each measure was the number of times the category was scored in the four protocols.

Semi-Projective Sentence Completion

This method was developed by Rogers and Neill (1966) to measure n Ach in groups with low verbal ability. Veroff, et al. (1971) selected one item from this measure and used it in an interview of a cross-sectional quota sample of Detroit, Michigan. The respondent is asked to complete the sentence "In the next ten years, I'm going to _____." After each response, the interviewer asks, "Anything else?" until the respondent indicates he can't think of any other goals. The interviewer then asks a series of four probe questions about each of the first two

[2]Donald Ryujin served as the expert coder and the author provided a check for interscorer agreement. Both had coding reliabilities over .90 based on the scoring system described by Atkinson (1958).

specific goals the respondent mentioned. The answers to the sentence completion question indicate the importance of achievement goals in the future. Responses to the probes reveal the scope of plans to attain the future goals and perceived chances of success.

Three indices of future orientation were derived from responses to the sentence completion question. The expert coder coded each goal mentioned as either an achievement, affiliative, power, or an unrelated kind of goal. There was over 90 percent agreement between the expert coder and the author in coding the kind of goal. Based on this coding, one index of Total Goals mentioned was constructed. A second measure was the number of Achievement Goals mentioned. A third measure is Achievement Imagery in the first goal. Despite explicit instructions and extensive training, some interviewers obtained more goal responses in the semi-projective item than other interviewers. Therefore, the Total Goals and possibly the Achievement Goals indices may be contaminated with interviewer effects. The third index of Achievement Imagery in the first goal mentioned is not affected by interviewer. Most respondents gave at least one goal and the measure based on the initial goal mentioned should be the most reliable.

A second set of measures was derived from responses to the probe questions. The indices were based on the probes concerning only the first specific goal because a number of respondents did not give a second goal. Although the interviewers were thoroughly briefed on the purpose of the probes, techniques of asking the probes, and definition of a specific goal, the quantity and quality of responses to the probes did appear to differ among interviewers.

Planning for future goals was measuring by asking the respondent what he had to do to attain his goal and secondly if he was doing anything at this time to attain this goal. After each response, the interviewer asked, "Anything else?" The expert coder reported the total number of steps a respondent thought he needed to do to reach his goal and the number of steps he had currently undertaken. The first question shows the extent of his planning. The second probe indicates whether the respondent has actually implemented his plans.

Two probes were used to evaluate the respondent's perceived expectations of success. First, the respondent was asked, "Are you concerned

about whether you will be able to get/do (goal) ?" Responses were coded for the total number of legitimate concerns. This measure can be interpreted in two ways. Concerns about being able to attain a goal may indicate a fear of failure. On the other hand, the concern can be about an obstacle that must be overcome. In the n Ach scoring system, evidence of concern about possible failure or an obstacle in one's path is a subcategory in scoring positive achievement orientation. Thus, Concerns can be conceived of as an amplification of an achievement theme. A more direct way to measure expectations is to ask the question, "What are your chances of getting/doing (goal) ?" The responses were divided into four categories; poor, fair, good, or very good.

Two Alternative Forced-Choice Items

A four item scale was used to measure the motive dimension of future achievement orientation based on the preliminary research by Atkinson and Moulton (1968) and Veroff, et al. (1971). All items paired a future oriented response with an alternative oriented toward the past or the present, (See Appendix A, p. 128).

Three scales designed to measure expectations were included in both the original study and the reinterview. The first assessed immediate expectations about the job training program. A second scale measured expectations about current chances for employment. The third measure is a general indicator of how much control a person feels he has over his life. This measure was first developed by Rotter (1954) and revised by Gurin, et al. (1969). The three scales consist of items pairing a high expectancy with a low expectancy alternative, (See Appendix A, pp. 128-130).

EVALUATION OF MEASURES

Three criteria are used to evaluate individual measures of future achievement orientations. Internal consistency reliability indicates how well a measure taps a hypothetical "true score" on a particular unidimensional trait. Test-retest reliability shows the stability of the measure over time. A measure should also have a positive correlation with experimentally controlled achievement behavior. A single satisfactory measure should meet all three criteria.

Internal Consistency

A primary method of assessing internal consistency reliability is the calculation of coefficient alpha (α) developed by Cronbach (1951). When scales are composed of items with only two response alternatives the Kuder-Richardson formula presented in equation 3-1 can be substituted

$$\alpha = KR_{20} = \left(\frac{K}{K-1}\right)\left(\frac{\sigma^2 - \Sigma p_i q_i}{\sigma^2}\right) \qquad (3\text{-}1)$$

K = number of items in the scale

σ^2 = test variance

P_i = proportion of respondents choosing one alternative

q_i = proportion of respondents choosing other alternative

The alpha coefficient is interpreted as the expected correlation of a measure with a second form of the measure administered to the same respondents, under the same conditions at the same time. Table 3-1 presents the average interitem correlations and alpha coefficients for the measures in the original and follow-up interviews.

The projective measures generally have low levels of internal consistency. The Anticipatory Goals measure has the highest alpha coefficients of any projective measures in both interviews (α=.30, .26). The alpha for the Instrumentality measure is fairly high in the follow-up interview (α=.39) but is minimal in the original interview. One factor contributing to the low levels of internal consistency is the method of scoring these scales. In order to have a positive score on the Instrumentality, Anticipatory Goals and Blocks measures, the protocol had to contain achievement imagery. Therefore, the internal consistency of achievement imagery in the four stories is an upper bound for the internal consistency of the subcategories. Because the semi-projective sentence completion measures are based on only one item, it is not possible to compute indices of internal consistency for these measures.

The four forced-choice measures included in both original and follow-up interviews all have hgher levels of internal consistency. The General Expectancy measure has an alpha of .48 in the first interview and .57 in the follow-up. Both Job Expectancy and Future Orientation

scales have adequate but somewhat lower alpha coefficients in both assessments. Although the Training Expectancy had a high initial alpha coefficient (α=.53) the level did not replicate in the interview (α=.23). Therefore this measure needs a more incisive examination before its meaning can be clearly understood.

Based on these initial appraisals, four measures appear to have adequate internal structure for use in subsequent analyses. The Anticipatory Goals index is the only projective measure that appears to have an adequate, replicable structure. There is some minimal evidence of an internal structure for the Long-term Involvement measure suggesting that this cornerstone of the achievement motive construct should not be summarily discarded on the basis of a low alpha coefficient. Despite relatively low alphas both the Future Orientation and Job Expectancy can be used with some confidence in further analyses. The measure with the most solid structure is the General Expectancy scale. This scale appears to be a meaningful measure of a generalized sense of personal efficacy for a variety of activities.

The alpha coefficients of these four measures although sufficient for aggregate data analysis are too low for individual prediction. Because the limited number of items in these scales tends to minimize the level of the internal consistency estimate, special attention should be given to the average interitem correlations. Highly intercorrelated sets of items form a solid structural foundation for the future expansion of these scales. Adding similar items can increase the level of internal consistency reliability and make the scales more appropriate for for more applied uses.

Test-retest Stability

A test-retest coefficient indicates the stability of a measure over time, rather than the internal reliability of the measure. Two kinds of statistics were used to assess stability. The Pearson-product moment correlation gives a linear interpretation of the relationship between interval scales. Since the measures in current study are at best ordinal scales, the gamma coefficient was also included. This index indicates the extent respondents score in high or low categories in both interviews. Both types of statistics are presented in Table 3-2.

TABLE 3-1

NUMBER OF ITEMS, AVERAGE INTERITEM CORRELATION AND ALPHA COEFFICIENT OF INTERNAL CONSISTENCY FOR MEASURES OF FUTURE ACHIEVEMENT ORIENTATION IN CROSS-SECTIONAL (1970, n=167) AND REINTERVIEW (1972, n=115) SAMPLES

		1970 n=167		1972 n=115	
Projective TAT Stories	Number of Items	Average Interitem Correlation	Alpha	Average Interitem Correlation	Alpha
Long-term involvement	4	.07	.23	.05	.17
Instrumentality	4	.01	.00	.14	.39
Anticipatory goals	4	.11	.33	.08	.26
Blocks	4	.07	.23	.03	.13
Semi-Projective Sentence Completion					
Total goals	NA				
Achievement goals	NA				
Achievement in first goal	NA				
Steps planned	NA				
Steps undertaken	NA				
Concerns	NA				
Chances of success	NA				
Two-Alternative Forced-Choice					
Future orientation	4	.17	.45	.11	.34
Training expectations	4	.22	.53	.07	.23
Job expectations	3	.17	.38	.14	.33
General expectations	4	.19	.48	.25	.57

TABLE 3-2

TEST-RETEST CORRELATIONS FOR MEASURES OF FUTURE ACHIEVEMENT ORIENTATION

Projective TAT Stories	Pearson Product Moment	Gamma Coefficient
Long-term involvement	.31	.43
Instrumentality	.03	.18
Anticipatory goals	.08	.22
Blocks	.20	.70
Semi-Projective Sentence Completion		
Total goals	-.02	-.11
Achievement goals	.27	.59
Achievement first goal	.17	.14
Steps planned	.02	-.26
Steps undertaken	-.11	-.21
Concerns	.16	.24
Chances of success	.02	.22
Two-Alternative Forced-Choice		
Future orientation	.23	.22
Training expectations	.34	.45
Job expectations	.28	.32
General expectations	.17	.08

The Long-term Involvement (r=.31) and Blocks (r=.20) projective measures had fairly high test retest stability. The number of Achievement Goals (r=.27) and Achievement Imagery (r=.17) indices derived from the semi-projective questions were also relatively stable. The answer to the probe about Concerns (r=.16) had a moderate degree of stability. All the forced-choice measures had test-retest reliability; Future Orientation (r=.23), Training Expectancy (r=.34), Job Expectancy (r=.28), and General Expectancy (r=.17). Gamma coefficients were comparable to the correlation coefficients.

The measures of a future achievement disposition all seem to be more stable than measures of other dimensions. Measures of planning and expectancy based on the projective and semi-projective questions have very little stability. There is an indication of an inverse relationship between the number of steps undertaken at the time of the original versus the follow-up interview. The two measures of specific expectations have higher levels of stability than were anticipated. It was hypothesized that the measure of General Expectancy should be more stable than more situation referenced Job or Training Expectancy scales. However, the more general expectations appear to be less stable.

One explanation for this apparent lack of stability of some measures is that particular subgroups of the sample had substantially different experiences between interviews. The logic of test-retest stability models requires an assumption that intervening conditions are equivalent for all respondents or that differential effects of experience are randomly distributed. Neither of these assumptions is warranted in the current analysis. Respondents who did not enroll in training had much less stable levels of Long-term Involvement (r=.00), Future Orientation (r= -.07) and General Expectancy (r= -.49) than respondents who were enrolled in training. Another analysis with a subgroup of 48 respondents who had substantial increases in employment between interviews showed that this group had more stable levels of Long-term Involvement (r=.48), Future Orientation (r=.32) and General Expectancy (r=.37) than the rest of the sample. Thus, these measures appear to be relatively stable given comparable experience. Which factors have an impact on individual levels of future achievement orientation dimensions is addressed in more detail in Chapter 4.

Relationship to Achievement Behavior

The 88 respondents enrolled in the training program at the time of the original interview completed a series of behavioral tasks. These tasks are designed to assess choice of moderately difficult tasks and level of performance when there is a moderate chance to succeed. From this group of tasks, a measure of choice and performance were combined into an index of achievement oriented behavior (Veroff, Hubbard, and Marquis, 1971). Pearson-product moment correlations and gamma coefficients of association between the behavior index and the measures of future achievement orientation appear in Table 3-3.

Four measures have positive relationships to the behavior index; Blocks (r=.16), Steps Planned (r=.24), Chance of Success (r=.17), and Future Orientation (r=.28). Both the Achievement Goals (r= -.10) and Concerns (r= -.17) measures have negative relationships with the behavior index, contrary to predictions. Other measures appear to have low positive relationships with achievement behavior.

The negative association between Achievement Goals and the behavior index cannot be satisfactorily explained. It suggests that the measure may not tap the future achievement disposition in the same way as the Future Orientation and Long-term Involvement indices. The Future Orientation scale has the highest relationship with behavior. The relationship between Long-term Involvement and behavior is positive but very low. These results clearly need further investigation and replication. Ideally, a measure of future achievement orientation should have a substantial positive correlation with indices of achievement behavior.

Summary and Conclusions

The results of this evaluation show that the forced-choice Future Orientation measure is the best single indicator of a future achievement disposition. Despite a low level of internal consistency and a low positive relationship with the achievement behavior index, the projective Long-term Involvement index has a strong history of research and should be included in further analyses. It also appears to be relatively stable under most conditions. The negative relationship of the semi-projective indices with achievement behavior suggest that these measures may not tap an achievement related disposition.

TABLE 3-3

RELATIONSHIP OF MEASURES OF FUTURE ACHIEVEMENT ORIENTATIONS TO AN ACHIEVEMENT BEHAVIOR CRITERION

Projective TAT Stories	Pearson Product Moment	Gamma Coefficient
Long-term involvement	.05	.06
Instrumentality	.06	.24
Anticipatory goals	-.02	-.06
Blocks	.16	.37 *
Semi-Projective Sentence Completion		
Total goals	-.08	-.15
Achievement goals	-.10	-.20
Achievement imagery	-.05	-.12
Steps planned	.24 *	.44 *
Steps undertaken	.09	.16
Concerns	-.17	-.37 *
Chances of success	.17	.29
Two-Alternative Forced-Choice		
Future orientation	.28 *	.53 *
Training expectations	.11	.44 *
Job expectations	.05	.14
General expectations	.07	.14

* Relationship is significant at the .05 level

Measures of planning have inconsistent patterns of results. The projective Instrumentality index has internal consistency in the reinterview sample, but has little stability and no relationship with achievement behavior. The semi-projective measures of plans have no stability, but appear to be strongly related to achievement behavior. These findings suggest that more investigation of these measures is warranted. A good measure of planning would be very useful in studying the connection of immediate behavior and future goals, however, no single measure appears to meet all criteria.

The three forced-choice measures of expectancy have adequate levels of internal consistency and could be included as modifiers of future achievement dispositions. The best single index of the expectancy dimension of the future is the General Expectancy scale.

COMPOSITE MEASURES

A distinct and perhaps more meaningful index is formed when individual measures are combined in some way. Two kinds of composite indices can be constructed. The first is a cluster of positively correlated measures of the same dimension. Another approach is to build a variable that designates groups of respondents having different configurations of the three components of future achievement orientations. Both kinds of composite indices can then be included in later analyses to assess the effect of an individual component and indicate the impact of all components taken together.

Individual Components

The first step in the development of a composite index of each dimension is the examination of the patterns of intercorrelation among the measures. Four projective, seven semi-projective, and four forced-choice measures were included in both the original 1970 study (see Table 3-4) and the follow-up 1972 study (see Table 3-5). An attempt was made to include a measure of each of three dimensions of future orientation within each method. Using a multi-method multi-trait analysis (Campbell and Fiske, 1959) it is possible to determine the degree to which measures tap a particular dimension and the influence of method effects. A positive correlation between measures of the same

TABLE 3-4

INTERCORRELATION OF MEASURES OF FUTURE ORIENTATIONS IN ORIGINAL 1970 SAMPLE (n=167)

	LTI	Instr	Antic Goals	Block	Total Goals	Ach Goals	Ach Imagery	Steps Plan	Steps Doing	Cncrn	Chnc	Futr Orntn	Trng Exp	Job Exp
Projective														
Long-term involvement														
Instrumentality	.06													
Anticipatory goals	.13	.17												
Blocks	.12	.11	.08											
Semi-Projective														
Total goals	.02	.16	.05	.00										
Achievement goals	.17	-.03	.06	.05	.21									
Achievement imagery	.19	-.07	.03	.00	-.20	.75								
Steps planned	.19	.21	.03	.14	.19	.08	-.01							
Steps doing	.07	.05	-.01	-.03	.15	.11	.09	.27						
Concerns	.12	.11	.10	.04	.12	-.00	-.03	.23	.10					
Chances	-.01	.13	-.04	-.00	.10	.10	.06	-.02	.08	-.02				
Forced-Choice														
Future orientation	-.05	.08	-.11	.09	-.10	-.04	.05	-.01	-.08	.00	.00			
Training expectation	.03	-.05	.00	.07	.04	-.05	-.05	.08	-.04	-.13	.17	.11		
Job expectation	.02	-.03	-.22	-.03	-.05	-.09	-.13	-.03	.10	-.06	.13	-.03	.26	
General expectation	.08	.05	-.05	.09	.07	-.05	.03	-.04	.14	.02	.12	.19	.10	.13

TABLE 3-5

INTERCORRELATION OF MEASURES OF FUTURE ORIENTATION IN REINTERVIEW 1972 SAMPLE (n=115)

	LTI	Instr	Antic Goals	Block	Total Goals	Ach Goals	Ach Imagery	Steps Plan	Steps Doing	Cncrn	Chnc	Futr Orntn	Trng Exp	Job Exp
Projective														
Long-term involvement														
Instrumentality	.19													
Anticipatory goals	.18	.48												
Blocks	-.07	.41	.41											
Semi-Projective														
Total goals	.11	.12	.06	.04										
Achievement goals	-.07	.03	.08	.05	.31									
Achievement imagery	-.07	-.02	-.07	.04	.06	.75								
Steps planned	.08	.11	-.15	-.04	.14	.14	.14							
Steps doing	.08	-.04	-.04	-.20	-.05	-.17	-.18	-.04						
Concerns	.10	.20	.03	-.05	-.23	-.02	.06	-.10	.13					
Chances	.03	.12	.11	.19	.12	.08	.03	.02	.17	-.23				
Forced-Choice														
Future orientation	.09	.23	.16	.17	.23	.01	.05	.14	-.06	.05	.11			
Training expectation	-.08	.05	.05	-.02	.14	.12	.02	.04	-.14	-.22	.08	.11		
Job expectation	.10	.05	.05	.02	.19	-.03	-.06	-.09	.06	-.29	.24	.17	.26	
General expectation	.10	-.05	-.06	-.06	-.22	-.20	-.05	-.01	.09	-.02	.15	.05	.18	.30

dimension across methods indicates that the measures are tapping the same dimension. If there is little correlation between measures of different dimensions using the same method, no substantial methods effects will contaminate analyses.

The five measures designed to tap the motive dimension of future achievement orientation do not have consistent replicable patterns of positive intercorrelation. Long-term Involvement was positively correlated with the Achievement Goals (r=.17) and Achievement Imagery (r=.19) indices in the 1970 study, but was negatively correlated with these indices in the follow-up study. The forced-choice Future Orientation scale was positively related to the Total Goals index (r=.23) in the follow-up but not in the original study. Other correlations between measures were either very low positive or negative. On the basis of these inconsistent patterns of correlations, none of the measures seem to tap the same dispositional motive component of future achievement orientation. Therefore, no composite indicator of a motive dimension is recommended.

Three measures were designed to indicate the capacity or disposition to plan. The projective Instrumentality index was positively correlated with the number of Steps Planned reported in the semi-projective question in both interviews (r=.21, .11). The number of Steps Undertaken was positively related to the Steps Planned in the initial study but not in the reinterview. One explanation for this pattern of results is that both Steps Planned and Instrumentality indices are projective measures, while Steps Undertaken is a more realistic indicator of behavior. Thus the environmental opportunities for actually carrying out plans may be an important determinant of the relationship between projected plans and those that can actually be carried out.

It also appears that a combination of Instrumentality with the Steps Planned indices forms a replicable composite index of the planning dimension of future achievement orientation. A three category Planning pattern variable was built based on configured scoring of dichotomous distributions of the two measures. Respondents with low scores on both indices were coded low on the Planning pattern variable. Those who scored high on both measures were placed in the high category. A

high-low pattern of scores was translated as a moderate level of Planning.

Seven measures of expectancy were intercorrelated. The three forced-choice expectancy scales (Training, Job and General) with the semi-projective estimate of Chances for Success compose a highly interrelated cluster of expectancy measures. The Concerns measure has a strong association with the expectancy cluster in the follow-up interview but not in the initial interview. This relationship could be another indication of the effects of the opportunity structure. Obstacles that were encountered in striving for goals between interviews may have been translated into an expression of realistic concerns and related lowered expectations in the reinterview. The positive stable pattern of associations of the four expectancy suggests that an additive combination of all measures could be used as a composite index of general strength of expectancies.

Patterns of Dimensions

The manner in which the various components are put together requires some reasonable conception of how the different components fit into the overall structure of future achievement orientation. A simple addition of scores for all components provides an easily interpreted index. However, theoretical models such as Raynor's (1969) elaboration of the theory of achievement motivation propose a more complex interaction among the components.

For the present study, measures of three components were developed that can be used to build a more complex Future Pattern variable. The Long-term Involvement measure divided into two halves represents the motive component. The three point Planning pattern variable indicates the extent of planning. The expectancy dimension is assessed by the General Expectancy scale separated into low, moderate and high categories. Eighteen possible combinations of Long-term Involvement, Planning, and General Expectancy were recoded into a five point scale (see Table 3-6) with approximately equal numbers of respondents in each category. The intent of the configural scoring was to have one pattern represent a low score on all measures and another represent consistent high scores on all components. A third configuration including

TABLE 3-6

CONFIGURAL SCORING OF COMBINATIONS OF LONG-TERM INVOLVEMENT, PLANNING AND GENERAL EXPECTANCY MEASURES, FOR THE FUTURE PATTERN VARIABLE

Long-Term Involvement	Planning	General Expectancy		
		Low	Moderate	High
Low	Low	1	1	2
	Moderate	1	3	3
	High	2	3	3
High	Low	2	4	4
	Moderate	4	5	5
	High	4	5	5

respondents with two low scores and one high score is intended to indicate a defensive future orientation. The final two categories indicate patterns of one low and two high components. The ordering of the five categories parallels a simple addition of components. Therefore, when this pattern variable is used in an MCA, it is possible to tell if this configural scoring scheme is more informative than a simple additive combination of the components.

One caution should be noted before unequivocal acceptance of this composite measure. A number of positive correlations were obtained between measures of the motive and planning dimensions. This suggests that the relationship between these two aspects of future achievement orientation needs to be closely examined before definitive conclusions are presented. For the exploratory nature of this study the Future Pattern variable should be a valuable research tool.

SUMMARY AND CONCLUSIONS

Three methods were used to measure three components of future achievement orientations. Each measure was evaluated on the basis of internal consistency, test-retest stability, and its relationship to achievement behavior. An attempt was also made to derive composite indices for each of the three dimensions based on patterns of intercorrelations. From these results it appears five measures can be recommended for inclusion in further analysis. Long-term Involvement seems to be the best indicator of the motive dimension. It has a long history of use as a criteria for coding achievement imagery and was found to be relatively stable over a two-year period. Another index that met all three criteria was the forced choice Future Orientation measure. Since this scale was not correlated with the Long term Involvement index it appears to tap a different aspect of the motive dimension. A composite Planning pattern variable constructed from the Instrumentality and Steps Planned measures should be a valuable instrument for the assessment of the planning component. Although a number of the expectancy measures met the criteria and were positively correlated, the General Expectancy measure has the strongest background in past research (Gurin et al., 1969) and should provide the most meaningful results. A final global Future Pattern variable was developed that combines the motive, planning

and expectancy components. This variable will demonstrate the importance of future achievement orientation as a complete and complex construct compared to the effects of individual components.

CHAPTER 4

DETERMINANTS OF FUTURE ORIENTATIONS

A variety of individual demographic characteristics, environmental opportunity structures and temporary situational conditions appear to have important effects on future orientations. Age and education have been interpreted as principal determinants of a general orientation to the future (Nuttin, 1964; Le Shan, 1952; Schneider and Lysgaard, 1953; and Kastenbaum, 1961). Socioeconomic status has been found to be related to tendency to delay gratification (Schneider and Lysgaard, 1953), writing stories with longer time perspectives (Le Shan, 1952) and setting goals further in the future (Nuttin, 1964). The presence of a father in the home and the prevailing norms in particular cultures influenced the choice of immediate compared to delayed reward by West Indian children (Mischel, 1958). On the other hand, Miller, et al. (1968) argue that the opportunity structure encountered by an individual plays a greater role in determining the orientation of behaviors. Israeli (1934) also reported that workers who had endured long periods of unemployment had a more depressed outlook for the future than patients hospitalized with melancholia.

A second group of studies looks at the combined effects of demographic characteristics and environmental obstacles. The relative status of a reference group plays a role in determining individual levels of aspiration (Chapman and Volkman, 1939; Preston and Bayton, 1941; and MacIntosh, 1942). These results suggest that in addition to absolute status and realistic opportunity, perceived status and opportunity also influence future orientation.

Other kinds of factors that have an impact on future oriented behaviors are variables in the immediate environment. The expectation of obtaining future goals (Mahrer, 1956; Raynor, 1969) and the value of the future goal (Grusec, 1968; Raynor, 1969) both contribute to the tendency to strive for that future goal. Feather (1967) and Diggory and Murlock (1964) found that previous patterns of performance determined whether stable personality dispositions or perceived probabilities of immediate chances for success elicit subsequent levels of aspirations and

expectations. These immediate situational factors should combine or possibly interact with, the constant demographic characteristics and opportunity structure to influence the strength of future orientations.

Unfortunately, few of the previous studies included a variety of predictors or used a multivariate analysis of their results. Therefore, it is difficult to evaluate the contribution of individual predictors and sets of predictors. In the current analysis it is possible to assess the relative impact of a number of predictors, as well as test the degree of bivariate relationship between predictors and the four components of future achievement orientations.

The effects of four types of factors can be appraised in the present analysis: demographic characteristics, labor market conditions, effects of job training experience, and job history. The demographic characteristics (age, race, marital status, and education) should be more strongly related to the more stable components of future achievement orientation. "Good" backgrounds should produce more positive dispositions toward the future. More transitory expectancy components should be affected more by the amount of training, hours worked, and labor markets prior to the first interview. Because measures were obtained at two times, it is also possible to investigate factors that contributed to changes between interviews. By categorizing different intervening experiences as described in Chapter 2, the effects of completing training, finding a training-related job, and steady employment can be ascertained. These factors should raise the expectations about the future. However, these intervening conditions should have little effect on the more dispositional components of future achievement orientations.

METHODS

In order to examine some of these hypotheses a Multiple Classification Analysis program was used to identify factors in both the formation and change of the individual components. These analyses, by themselves and in combination with findings introduced from more detailed analyses should provide a more comprehensive framework for the further study of future orientations.

Only variables with few missing data cases were included in an MCA to conserve degrees of freedom. Consequently, age, race, marital status and education were used as the principal predictors. Each was recoded into two or three level categorical variables for all analyses. For the examination of initial interview measures, the four category Training Experience variable and an index of hours worked prior to the initial interview were also selected as predictors. In the search for determinants of reinterview measures, the best indicator of labor market and/or training outcome effects (either the Termination Status, Date of Termination, or Status-date-pattern variable) was chosen as a fifth predictor in addition to the four demographic variables. With the wide scope of this study firm conclusions can be made concerning the relative importance of the possible determinants of each dimension of the future. The results from four sets of MCA runs for both the initial interview and the follow-up are described and discussed in the following sections.

INITIAL INTERVIEW MEASURES

The results of the MCA for the initial interview measures (see Table 4-1) show that Training experience (see Table 4-2) had a substantial effect for the indicators of the planning and expectancy dimensions. Age, race and pretraining employment had negligible impact. Education and marital status had some slight association with the General Expectancy scale. None of the predictors had much influence on the levels of either Long-term Involvement or Future Orientation indices.

Planning scores were strongly associated with the amount of Training Experience ($Beta^2 = .05$). Trainees who just entered training had higher levels of Planning (2.10) than applicants, trainees about to graduate or past graduates who had adjusted average Planning scores of about 1.75. This appears to be a reasonable finding. Students who are about to implement plans, should have more concrete ideas of what they are going to do in training and these thoughts would tend to be more salient. Orientation at the Center also may have given entering students a well defined picture of what they would be doing in training. If this is the case, it appears that the capacity or tendency to plan can be affected by the environmental conditions or instructional programs that outline or emphasize planning.

TABLE 4-1

BETA[2] COEFFICIENTS FROM MCA FOR INITIAL INTERVIEW MEASURES

	Long-term Involvement	Future Orientation	Planning	General Expectancy
Age	.00	.00	.01	.00
Race	.00	.01	.01	.01
Marital Status	.00	.00	.01	.03
Education	.02	.01	.02	.03
Training Experience	.03	.02	.05	.05
Hours Worked Prior to Interview	.00	.01	.01	.00

TABLE 4-2

ADJUSTED MEAN SCORES FOR INITIAL INTERVIEW MEASURES IN EACH CATEGORY OF THE TRAINING EXPERIENCE PREDICTOR

	Long-term Involvement	Future Orientation	Planning	General Expectancy
Applicant	1.32	2.76	1.79	1.62
Beginning	1.68	2.48	2.10	1.87
Completing	1.69	2.50	1.69	2.03
Graduate	1.48	2.86	1.75	2.31

General Expectancy is the scale that seems to have the strongest associations with the most predictors. Together all six predictors explained relatively more variance (11% unadjusted, 6% adjusted) for this index compared to the other measures. The General Expectancy scores increased monotonically as a function of more Training Experience from an adjusted mean of 1.62 for applicants to 2.31 for graduates. Thus, as might be logically expected, more training led to an increased sense of personal efficacy. Besides providing skills, the training program also helps a student gain a greater sense of control over his life. These relationships indicate that the General Expectancy index does represent an expectancy construct that reflects changes in experience.

These results seem to support the hypotheses suggested in the introduction. Relatively more variance is explained for measures that were considered to be amenable to situational influences; Planning and General Expectancy. The two dispositional scales, Long-term Involvement and Future Orientation seemed to have little relationship to previous experience. These two scales also had no association with stable background factors such as age, race, or father's education. The lack of association between these two types of variables may be due to the homogeneity of the sample rather than the unimportance of immutable demographic characteristics.

REINTERVIEW MEASURES

Demographic characteristics, training outcomes and the labor market conditions have a much greater impact on the reinterview measures (see Table 4-3). The most potent predictor of all four components is the Status-date Pattern variable that combines the outcome of training with the pattern of unemployment rates before and after training (see Table 4-4). By reviewing the relationship of the Status-date Pattern variable and other predictors with each component it should be possible to more thoroughly understand how intervening experiences affect the overall strength of future orientations.

Long-term Involvement

The interaction of Termination Status with the Date of Termination ($Beta^2$ = .11) has an effect that is substantially greater than that of

TABLE 4-3

BETA^2 COEFFICIENTS FROM MCA FOR REINTERVIEW MEASURES

	Long-term Involvement	Future Orientation	Planning	General Expectancy
Age	.00	.05	.00	.00
Race	.00	.02	.01	.00
Marital Status	.01	.01	.00	.05
Education	.02	.09	.05	.01
Termination Status	.02	.13	.11	.04
Date of Termination	.03	.01	.03	.03
Status-date Pattern	.11	.14	.15	.07

TABLE 4-4

ADJUSTED MEAN SCORES OF REINTERVIEW MEASURES IN EACH CATEGORY OF THE STATUS-DATE PATTERN INDEX

	Long-term Involvement	Future Orientation	Planning	General Expectancy
Did Not Enroll	1.33	1.89	1.55	2.57
Dropped Out	1.50	2.22	2.02	2.32
Completed				
1969	1.73	1.27	1.63	2.55
1970	1.25	2.00	1.36	1.71
1971	0.83	1.67	1.17	1.76
Placed				
1969	1.49	2.85	1.71	2.36
1970	1.88	2.88	2.00	2.50
1971	1.25	2.45	1.54	2.58

either variable taken singly. Trainees who left the program without a related job in 1971 (0.83) or 1970 (1.25) had much lower levels of Long-term Involvement than unplaced graduates from 1969 (1.73). These two groups also had a substantial decrease of almost one standard deviation between the two interviews. Other groups had no change or relatively minor shifts.

The results from this analysis are especially significant. Since the preponderance of theoretical and empirical evidence indicate that Long-term Involvement is a measure of a stable, dispositional construct, any experience that results in a change in its level must be especially traumatic. This appears to be the case. Graduating from training in a bad labor market without a training related job and little opportunity to find one produces a dramatic drop in future motive strength. Participating in a program or series of instrumental activities that brings no tangible payoff would appear to diminish any desire to engage in such activities again. It can not be determined how long these effects may last or what their long term consequences will be. In any case their devastating impact on motive strengths should not be ignored.

Future Orientation

In addition to a potent influence of the Status-date Pattern variable ($Beta^2$ = .14), age ($Beta^2$ = .05) and education ($Beta^2$ = .09) also had an effect on the reinterview level of the Future Orientation scale. Younger men and men with some high school education had higher scores. Although the pattern variable did have a strong association with Future Orientation scores, most of the variance could be explained using only the Termination Status predictor ($Beta^2$ = .13). Date of Termination ($Beta^2$ = .01) appears to have no interactive effect with training outcomes for this scale.

Again, it seems that program graduates who were not placed in training related jobs had the lowest scores (1.79) and also suffered the severest drop in scores between interviews (-0.83). Unlike the results for Long-term Involvement, unplaced graduates in 1969 had the lowest scores in the reinterview and a greater decrease in scores than the graduates who were not placed in 1970 or 1971. Therefore this detrimental effect seems to occur regardless of the labor market conditions and may

even be accentuated when no placement is obtained in a labor market that offers good opportunities for placement. Respondents who were placed in training related jobs maintained similar levels of Future Orientation in both interviews and had reinterview scores that were significantly higher than those for the other three groups.

Another intriguing finding is that dropouts had relatively high levels of Future Orientation in the reinterview (2.22) and also tended to have a slight increase in average scores. This kind of result was also found by Gurin (1968). Dropouts were found to be more highly motivated and had higher levels of employment than those who remained in the program. However, in the current study, few dropouts left the program voluntarily and those who did not complete the program did not do well economically after training. Thus, maintaining a high level of Future Orientation may indicate an unrealistic, defensive outlook for the future rather than the presence of an effective motivational component.

In conclusion, it seems that the inability to receive placement in a training related job immediately after training results in a substantial decrement in this aspect of orientation toward future achievement. There also appears to be sufficient evidence to conclude that the Future Orientation scale is not a measure of a highly stable future disposition. The variety of factors that are related to the reinterview scores suggest that this scale functions more like an expectancy construct. Since the index does appear to reflect important differences in experience, further investigation should be undertaken to determine which element of future achievement orientations is tapped by this measure. Until the conceptual underpinnings of this scale are established, the total impact of training outcomes on future achievement orientations can not be fully evaluated.

Planning

Both education ($Beta^2$ = .05) and the Status-date Pattern variable ($Beta^2$ = .15) were related to the level of Planning. Men with less than eight grades of education had lower scores. The interaction of training outcome and labor market conditions does not appear to be very important. Most of the variance in the pattern variable is attributable to

Termination Status ($Beta^2$ = .11) rather than the Date of Termination ($Beta^2$ = .03).

Of the four training outcomes, those who dropped out of the program had the highest average Planning scores. This may be another indication of a defensive orientation toward the future. Despite the high level of planning, this group did not seem to make any attempt to carry out these plans at least as reflected by the economic and job search indicators in this study.

Low levels of planning in the reinterview seemed to be a result of lack of placement in a training related job, especially when the unemployment rate was high. Unplaced graduates in 1970 (1.36) and 1971 (1.17) had the lowest average Planning scores. This appears to be another indication of the detrimental effects of not being placed in a training related job in a bad labor market. Applicants who did not enroll, unplaced graduates in good labor markets and graduates placed in training related jobs had relatively higher Planning scores. Thus, it appears that these combined experiences of nonplacement and lack of opportunity have a unique and pervasive impact on a variety of components of future achievement orientation.

General Expectancy

Surprisingly, the reinterview General Expectancy scores look to be relatively unaffected by the combinations of explanatory variables. Only 11 percent of the variance is explained by the best set of five predictors. Marital status ($Beta^2$ = .05) and the Status-date Pattern variable ($Beta^2$ = .07) are the only factors that are of any importance. Single men had lower expectancies than respondents who were married.

As for the other components, the Status-date Pattern variable produced the most interesting results. Again unplaced graduates in 1970 (1.71) and 1971 (1.76) had the lowest scores further demonstrating the unfortunate effect of merely completing training in a bad labor market. There was no interpretable pattern of changes in scores between any of the groups that were enrolled in training. However, applicants who did not enroll in training had a sizable increase in expectancy (+0.72) between interviews giving them a final level of General Expectancy (2.57) that was even greater than the average reinterview scores for

placed graduates (2.48). This increase is similar to the difference between applicants and training graduates in the original interview. That difference was attributed to the effects of training experience. Consequently the labor force participation for non-enrolled applicants might be just as important to the development of a sense of personal efficacy as participation in a training program. A more detailed design with assessment at a number of critical points would be necessary to definitively delineate how these two experiences contribute to the development of a sense of personal control.

SUMMARY

Multiple Classification Analysis programs were used to investigate possible determinants of initial and reinterview levels of each of the measures of the four components of future achievement orientation. The predictors that were used in the analyses were selected to cover a range of demographic, job training, labor market and job history variables. Very little variance was explained for any of the initial levels of any of the components. The amount of Training Experience was the only predictor that had an appreciable effect and this was only for the Planning and General Expectancy measures. Substantially more variance was explained for the reinterview measures of Future Orientation and Planning. The pattern variable composed of eight combinations of Termination Status and Date of Termination was the most important predictor of the scores for all components in the reinterview.

In general, the lowest reinterview scores for all components were found for graduates who were not placed in training related jobs, particularly those leaving training in the bad labor markets of 1970 and 1971. The key to maintaining or developing high levels of future achievement orientations seems to be the payoff of a training related job. Not being placed in a training related job, especially when there is little chance of finding such jobs, leads to a substantially lower level of each component. Therefore, it is crucial to orient economic policy training programs, and other resources to helping training graduates find jobs which utilize skills acquired in training. Not only does a discontinuity between preparation and payoff create short-term economic losses as described in the next chapter, but it also has a

devastating impact on future achievement orientations that could have long-term consequences.

A second finding was that men who entered but did not complete training maintained a relatively high level of future orientation. This seems to suggest an inability or lack of desire to readjust future outlooks to the fact that dropping out of training likely decreased their chances of future success. This maintenance of unrealistically high future orientations may function as a defense against the impact of immediate failure. Other hypotheses are that dropouts may have entered training with expectations that were unrealistically high, or perhaps they did not clearly perceive a connection between completing training and their future goals.

Overall it appears that the Long-term Involvement measures was not related to situational changes. This supports the assumption that Long-term Involvement is a dispositional construct. It was hypothesized that General Expectancy should reflect the impact of intervening experience, but no such effects were found for the reinterview measure. Thus, this scale seems to tap a more dispositional aspect of expectancy. The other measures of Future Orientation and Planning also appear to be affected by intervening experiences, especially training outcomes. Except for Long-term Involvement which is clearly a dispositional motive measure, the other measures appear to be an amalgam of dispositions that are relatively immune to situational fluctuations and expectancies that are susceptible to the transitory influences of deviations in experience.

A fundamental question that needs further examination is whether these results are due to the characteristics of the measurement instruments or the nature of the components they are designed to assess. If the measures are unstable, which they do not appear to be, more refinement of the scales is necessary. If the psychological components of future achievement orientations are in fact changed, this has profound implications for training programs and manpower policy. Decisions that are made about the goals and methods of implementing policy will have a substantial impact on the levels of future orientations of those affected by this policy. Unfortunately the effects of these impacts may not be readily discernible in short run analyses. Therefore there must always be some consideration of these possible long-term psychological benefits and costs before a policy is implemented.

CHAPTER 5

FUTURE ACHIEVEMENT ORIENTATION AS A PREDICTOR OF SUCCESS

Past research provides no conclusive support for any one conception of the relationship of future orientation and performance. Three explanations have been presented and data have been interpreted as substantiating each of the viewpoints. In the first interpretation, it is assumed that future orientation should have a direct monotonic relationship with achievement. From another perspective, a very high level of concerns about the future is believed to indicate overmotivation or a defense against the likelihood of immediate failure. Both types of unrealistic orientation would result in a decrement in performance. A third idea is that a future construct by itself may have little effect, but it can function as a moderator of other motivations. In combination, future orientation and motivations should lead to more vigorous and persistent behavior.

In support of the monotonic interpretation, Lewin (1942) argued that the "long range and realistic time perspective" of Zionists in Germany during the early years of World War II resulted in higher morale, more initiative, organized planning and a greater capacity to cope with the Nazi threat. Teahan (1958) found that male seventh and eighth graders scoring high on three measures of future orientation performed better than low scorers in school. Ezekiel (1968) found that four measures of future orientation obtained in interviews of Peace Corps volunteers during training were significantly related to performance in the field and follow-up reports of post-tour employment in the Peace Corps, feelings that the Peace Corps helped direct their career, and participation in the civil rights movement.

Since Long-term Involvement is one of the three criteria for coding achievement imagery (McClelland, et al., 1953), all studies using the n Ach construct (Atkinson, 1958; Atkinson and Feather, 1966; Atkinson and Raynor, 1974) necessarily include an element of future achievement orientation in their predictor variable. Rogers and Neill (1966) developed a sentence completion measure of n Ach for Columbian farmers

containing two future related items. They reported that the measure was related to a variety of ratings of forming success. Veroff, Hubbard and Marquis (1971) found positive associations of a forced choice measure of future achievement orientation with achievement related behavior in a job training program and with wage rates of trainees prior to entering training. In all these studies the implicit assumption is that future orientation has a monotonic positive relationship with the level of performance.

The Douvan and Adelson (1966) study points out one problem in assuming a monotonic relationship. They concluded that the expression of occupational interests in both fantasy and concrete planning by a cross-sectional sample of adolescents indicates realistic career aspirations. However, 50 percent of this sample aspired to and planned for a professional or semi-professional career, when only 5 percent of all available jobs were of this type. Without radical transformation of the labor market, 45 percent of this sample will fail to attain their "realistic" aspiration and their "concrete" plans will lead to a wild goose chase.

Cloward and Ohlin (1960) point out that one adaptation to limited opportunity is the retreatist delinquent subculture, composed of individuals "who have withdrawn from competition in the larger society, who anticipate defeat and now seek escape from the burden of failure." In such groups, an orientation toward the future may focus on unrealistic wishes instead of on actions in the present that will lead to obtainable goals.

A number of studies support this interpretation. Veroff, McClelland and Marquis (1971) obtained a negative relationship between a measure of future orientation and achievement behavior for a cross section of black females, a demographic group who have had obviously limited opportunities for achievement. Klineberg (1967) found a reversal in the relationship of future orientation with adjustment as a function of age. Future fantasy was positively related to adjustment up to age twelve, but in adolescence, adjustment was more closely related to aspirations for realistic future goals and the development of plans to reach these goals. These findings imply that a high level of future orientation, especially in the absence of plans or instrumental activities, may not

lead to functional performance. Fraisse (1963) stressed that effective future oriented activity requires a balanced attention to the past and present as well as the future. Present actions serve as a link to future success which is contingent on adequate performance in a series of intermediate steps. The concern for the present situation must not be ignored or replaced by a pervasive concentration on future goals.

A third set of studies demonstrates the interactive effects of future concerns and motivation on behavior. Nuttin (1964) reported that performance level increased when the first activity led to an opportunity to work on other tasks. When a single task was presented a lower level of performance was obtained. Raynor's (1968) investigation of the interaction of future orientation and achievement motivation was based on studies showing that when highly motivated students believed a course was instrumental to their future success they made higher grades (Isaacson and Raynor, 1966) and were more concerned about doing well on the final exam for the course (Raynor, Atkinson and Brown, 1974). Other findings supported hypotheses derived from Raynor's (1969) elaborated theory of achievement motivation: higher levels of performance in contingent paths by subjects with strong motivations (Raynor and Rubin, 1971), greater persistence in working on tasks of moderate difficulty by high need achievers (Raynor and Entin, 1972) and differential performance level in easy, moderate, and difficult paths for four groups categorized according to motive levels. Although these results do not completely validate the Raynor model, particularly for subjects with low levels of achievement motivation, they do indicate the importance of the moderating effects of future orientation.

Such diverse findings involving many complex patterns of interrelationships make it difficult to draw simple conclusions or construct general hypotheses concerning the impact of future orientations. It now seems mandatory to examine the nature of the causal relationship between future constructs and success more closely. Does the future have a direct motivational effect or does it function more as a moderator of other motives? Is the association of future orientation and success monotonic, curvilinear or a more complex interactive function? A second consideration is the determination of which component or

combination of components explains the greatest portion of the variance in behavior. Does each component have a unique effect, or does a combination of components have more predictive power? If the latter is the case, which configurations of components are the most beneficial and which are the most detrimental. Finally, the impact of future orientation must be ascertained independent of and in combination with demographic, institutional, situational and historical explanations of behavior.

In order to explore these questions, it is necessary to analyze the bivariate and multivariate associations of future constructs with a variety of behaviors. The present analysis focuses on the relatively unexplored area of the importance of future achievement orientation for the outcome of job training programs, job search activites and economic success, areas that should be related to future achievement concerns. The effects of future achievement orientation on these indices, especially economic success, may not be apparent for the levels of immediate performance, but the future should have a clear relationship with cumulative achievement over the long run. The analyses of the associations of future achievement orientations with each of the indicators of success in both the long and short run are presented in the following sections of this chapter.

METHODS

Because of its capacity to handle categorical predictors in a multivariate framework, the Multiple Classification Analysis program was used to evaluate the predictive validity of the five measures of future achievement orientation. In order to obtain logical estimates of predictive validity, the main analyses focused on samples of respondents who were interviewed prior to the occurrence of a particular dependent variable.

For the MCAs, the four component indices were recoded into categorical variables. The possibility of curvilinearity was considered by dividing the Future Orientation, Planning and General Expectancy measures into three point scales. The distribution of the Long-term Involvement index permitted only a dichotimization. These four variables and the composite Future Pattern variable were included in separate

MCAs with the best set of demographic, job training, labor market and job history predictors derived from preliminary analyses. To assess the marginal predictive effects of the five future measures, a sixth MCA was conducted including only the best set of the non-future predictors. The magnitude of the marginal effect is estimated from the squared partial correlation which removes the effects of all other predictors from both the independent and dependent variables.

ECONOMIC SUCCESS

Two standards of economic success are included in this section. The first index of quantity of employment is the number of hours worked, excluding overtime, in a particular six month period. A second gauge of the quality of the job is the average hourly wage rate over a six-month period. Wage rates on different jobs during a period were weighted by the number of hours the respondent reported working at that rate. The hours and wage rates were calculated for three six-month periods; prior to entering training, immediately after training and before the reinterview (July-December, 1971). Results for each of these indicators are presented and discussed in the following sections.

Hours Worked

Distinctly different kinds of predictors were the most important determinants of employment in each of the six-month periods. Before training, demographic characteristics and labor market conditions had the strongest associations with hours worked. Immediately after training placement in a training related job had the dominant impact. However, in the long run, the effects of training outcomes appeared to diminish and in the final six months the pattern of future achievement orientations became the most potent predictor of employment.

These analyses focused exclusively on respondents who had not graduated from training prior to the initial interview. More detailed discussions of these results are presented in the succeeding paragraphs. Table 5-1 shows the eta^2 and $beta^2$ coefficients of all types of predictors with hours worked. In Table 5-2 the unadjusted and adjusted estimates of the variance explained by the best set of non-future predictors are presented. The marginal predictive power of each measure of future achievement orientation can be seen in Table 5-3.

TABLE 5-1

BIVARIATE ETA^2 AND MULTIVARIATE BETA^2 COEFFICIENTS FROM MCA FOR HOURS WORKED

	6 Months Before Training Preinterview Graduates Excluded (n=125)		6 Months After Training Preinterview Graduates Excluded (n=84)		July-Dec 1971 Preinterview Graduates Excluded (n=82)	
	Eta^2	Beta^2	Eta^2	Beta^2	Eta^2	Beta^2
Age	.06	.01	.01	.00	.02	.03
Race	.02	.01	.01	.00	.00	.00
Marital Status	.10	.10	.03	.02	.01	.00
Education	.03	.00	.03	.07	.01	.01
Hours Worked Before Training	—	—	.04	.04	.05	.04
Termination Status	.02	.01	.12	.15	.06	.06
Date of Termination	.04	.04	.03	.00	.05	.04
Status-Date Pattern	.05	.06	.10	.08	.10	.08
Long Term Involvement	.01	.00	.00	.00	.00	.00
Future Orientation	.00	.00	.03	.01	.00	.00
Planning	.02	.02	.02	.01	.02	.01
General Expectancy	.03	.02	.04	.00	.06	.03
Future Pattern	.05	.03	.03	.01	.12	.12

TABLE 5-2

UNADJUSTED AND ADJUSTED ESTIMATES OF EXPLAINED VARIANCE IN HOURS WORKED USING DEMOGRAPHIC, JOB TRAINING, LABOR MARKET AND JOB HISTORY PREDICTORS

	Unadjusted R^2	Adjusted R^2
6 Months Before Training (Preinterview Graduates Excluded, n=125) (Marital Status, Education and Labor Market)	.15	.12
6 Months After Training Preinterview Graduates Excluded, n=84 (Marital Status, Education, Termination Status, and Hours Worked Before Training)	.24	.17
July-December, 1971 Preinterview Graduates Excluded, n=82 (Marital Status, Education, Termination Status and Hours Worked Before Training)	.13	.04

TABLE 5-3

UNADJUSTED AND ADJUSTED SQUARED PARTIAL CORRELATIONS
OF MEASURES OF FUTURE ACHIEVEMENT ORIENTATION WITH HOURS WORKED

	6 Months Before Training (Preinterview Graduates Excluded, n = 125)		6 Months After Training (Preinterview Graduates Excluded, n = 84)		July-December, 1971 (Preinterview Graduates Excluded, n = 82)	
	Unadj	Adj	Unadj	Adj	Unadj	Adj
Long-term Involvement	.00	.00	.01	.00	.00	-.01
Future Orientation	.00	-.01	.03	.00	.00	-.02
Planning	.02	.01	.01	-.01	.00	-.02
General Expectancy	.02	.01	.00	-.02	.02	.00
Future Pattern	.04	.00	.01	-.02	.13	.08

In the six months prior to entering training, Marital Status ($Beta^2$ = .10) and Date of Termination ($Beta^2$ = .04) had the strongest effects on employment. Age had a significant bivariate effect (Eta^2 = .06, $p < .05$) but almost no effect when other predictors were taken into account. Married men worked almost twice as many hours as single men (571 versus 298) in this period. Respondents who worked in a labor market with a 6 percent unemployment rate worked an average of 527 hours compared to 344 for men working at a time when almost 12 percent of the labor force was unemployed. None of the measures of future achievement orientation had much influence on work in these six months.

Immediately after training, Termination Status ($Beta^2$ = .15) was clearly the main determinant of employment (see Figure 5-1). Graduates placed in training related jobs worked 719 hours compared to 378 hours for graduates who were not placed. Applicants who did not enroll in training had 320 hours of employment. Respondents who entered but did not complete the program found even less work on the average (294 hours). Education ($Beta^2$ = .07) and pretraining job history ($Beta^2$ = .04) had less important effects. Again none of the future achievement measures accounted for much variance.

In the July-December, 1971 period the influence of Termination Status ($Beta^2$ = .06) was substantially less than it was immediately after training. Although graduates placed in training related jobs continued to have high employment (720 hours), other groups tended to work more hours in this period compared to immediately after training. Applicants who did not enroll worked 530 hours on the average, dropouts 412 hours and graduates who were not placed 485 hours.

Future achievement orientations assumed a much more important role in the prediction of long-term economic success (see Figure 5-2). The bivariate relationship (Eta^2 = .12, $p < .05$) of the Future Pattern variable with hours worked is significant. In a multivariate context the squared partial correlation of .13 ($p < .10$) indicates that the Future Pattern variable can explain a substantial portion of the variance in long-term employment even when it is included with a strong set of predictors. Respondents with high scores on all components, and surprisingly, the group with one inconsistently high component both averaged over 700 hours of employment. High Long-term Involvement scores coupled

FIGURE 5 - 1

HOURS WORKED IN THREE SIX MONTH PERIODS
FOR FOUR TERMINATION STATUS OUTCOMES

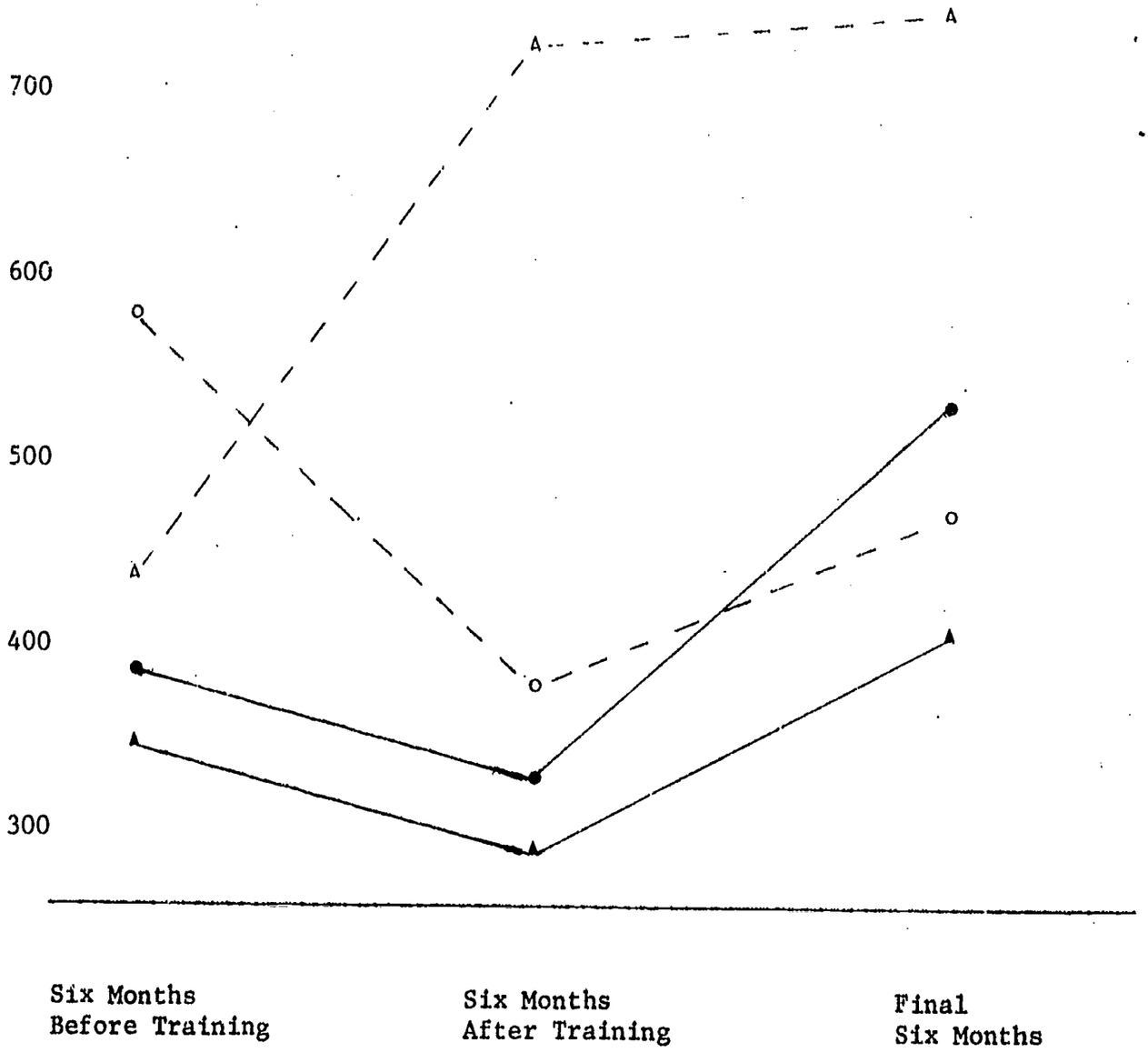
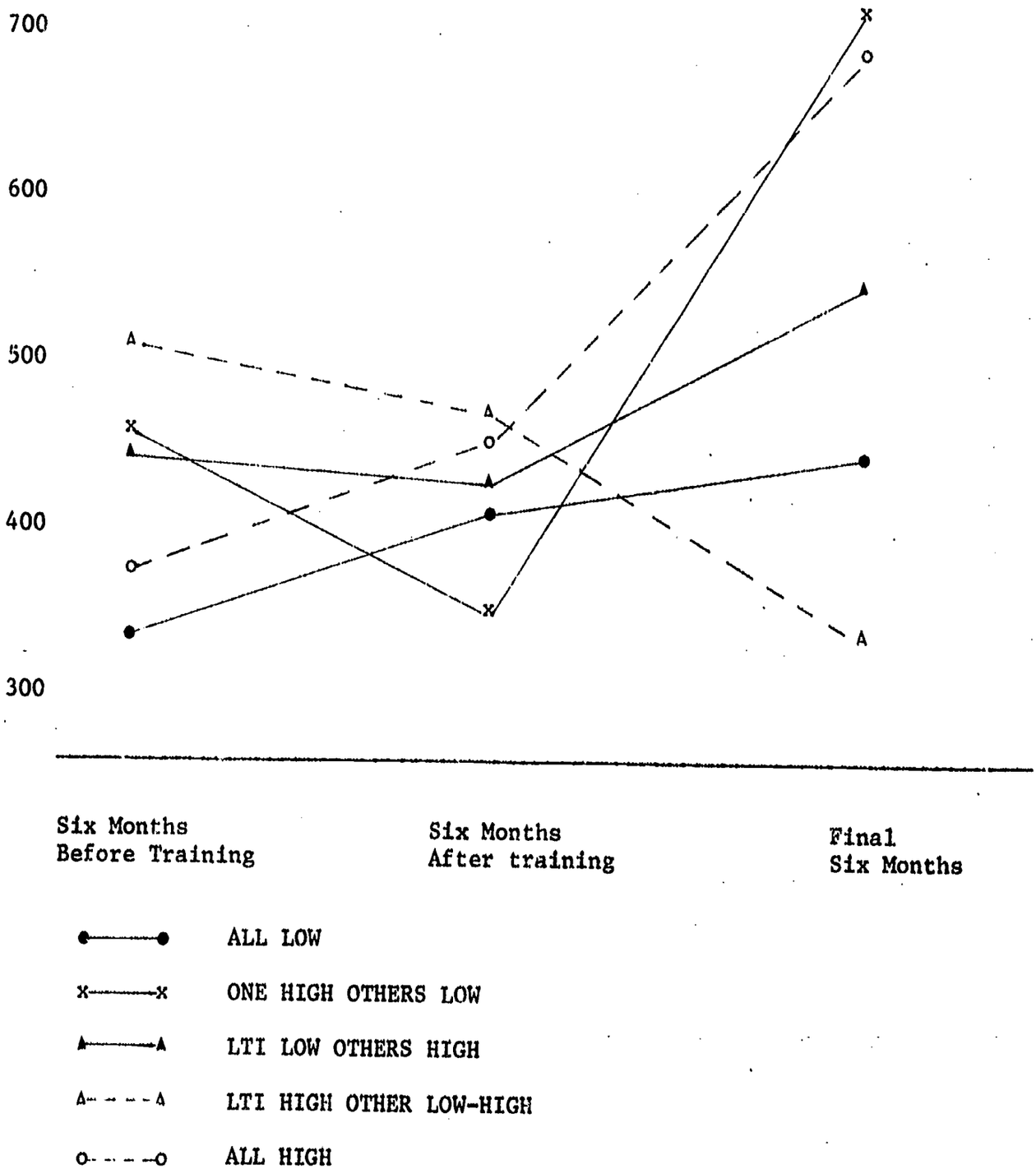


FIGURE 5 - 2

HOURS WORKED IN THREE SIX MONTH PERIODS

FOR FIVE CONFIGURATIONS OF THE FUTURE PATTERN VARIABLE



with inconsistent high-low or low-high patterns for Planning and General Expectancy measures resulted in the lowest level of employment (325) hours. The groups with the two remaining patterns fell midway between these two extremes. The large discrepancies in employment among the groups with different configurations of the three future achievement conponents indicates the need for further study of patterns of future achievement orientations that result in the most efficient performance.

The General Expectancy measure also appeared to have a strong association with employment (Eta^2 = .06) replicating the findings reported by Gurin (1968). However, the effect was reduced ($Beta^2$ = .03) when other factors were taken into account. This result demonstrates the necessity of evaluating the predictive validity of a measure in a multivariate context.

The overall patterns of association of the various types of predictors with employment in the three time periods suggest a general developmental framework for the assessment of when and how much stable background factors, education programs, and individual future orientations contribute to loug term economic success. Demographic characteristics may be important up to a certain point. However, if educational programs, such as job training, provide a real opportunity to improve skills or acquire a good job, the outcome of this institutional experience will have a very substantial impact on success, especially in the short run. Unfortunately, these effects appear to decrease over time. Then it seems that personal future achievement orientations assume a more prominent role in the determination of long-term success.

Wage Rates

Unlike the relationship of future achievement orientation with employment, the future measures have stronger relationships with wage rates prior to training than with wage rates over a year after training. Also the effects of Termination Status appear to have long term as well as immediate effects. Thus wage rate appears to be an indicator of a distinct aspect of economic success.

In the analyses of the determinants of wage rates, respondents who had no job during a particular six months were excluded from the analyses for that period. Since this exclusion of unemployed respondents

results in a small samples, preinterview graduates were also included in analyses of post training wage rates. Eta^2 and $beta^2$ coefficients for analyses including and excluding these preinterview graduates are presented in Table 5-4. Estimates of explained variance are shown in Table 5-5 and the marginal effects are given in Table 5-6. The more important associations of predictors and wage rates in each period are examined more fully in the following sections.

Prior to training age ($Beta^2$ = .10) was strongly associated with wage rates. Older workers (over 21) made about fifty cents an hour more than younger men. However, the more notable predictors were the measures of future achievement orientation.

The forced choice Future Orientation scale has a significant bivariate (Eta^2 = .09, $p < .01$) and marginal (Partial R^2 = .10, $p < .05$) association with pretraining hourly rates. The relationship appears to be monotonic with low scorers averaging $1.86 per hour, moderate scores $2.26 an hour and the high group $2.55 per hour. The Future Pattern variable also has significant bivariate (Eta^2 = .15, $p < .01$) and marginal (Partial R^2 = .16, $p < .05$) effects. The respondents with consistently high scores on all components earned $2.62 an hour. An inconsistent pattern of high Long-term Involvement scores and a high-low or low-high configuration of Planning and General Expectancy scores produced the lowest hourly wage of $1.69. In addition, the Planning measure had near significant bivariate (Eta^2 = .05) and marginal (Partial R^2 = .06) relationships with wage rate.

Despite the strong relationships of measures of future achievement orientation with pretraining wage rates, these measures have little effect after training. Termination Status ($Beta^2$ = .16) and race ($Beta^2$ = .09) were the primary correlates of wage rates immediately after training (see Figure 5-3). Whites had an average wage of $2.63 compared to $2.22 for the non-white respondents. Trainees in training related jobs earned $2.68 an hour while non-placed completers earned the lowest $2.02 per hour. The Future Pattern variable had a large (Eta^2 = .06) bivariate relationship with wage rate but almost no relationship ($Beta^2$ = .01) when other variables are included in the analysis.

Termination Status ($Beta^2$ = .17) continued to have a strong effect on final wage rates. Unlike the after training wage rate, the

TABLE 5-4

BIVARIATE ETA^2 AND MULTIVARIATE BETA^2 COEFFICIENT FROM MCA FOR AVERAGE HOURLY WAGE RATE

	6 Months Before Training (Preinterview Graduates Excluded, n=85)		6 Months After Training (Preinterview Graduates Excluded, n=54)		6 Months After Training (Preinterview Graduates Included, n=82)		July-December, 1971 (Preinterview Graduates Excluded, n=53)		July-December, 1971 (Preinterview Graduates Included, n=73)	
	Eta^2	Beta^2	Eta^2	Beta^2	Eta^2	Beta^2	Eta^2	Beta^2	Eta^2	Beta^2
Age	.11	.10	.01	.00	.00	.00	.00	.03	.00	.04
Race	.00	.00	.05	.09	.01	.03	.03	.02	.01	.01
Marital Status	.03	..01	.02	.04	.04	.04	.12	.13	.11	.12
Education	.01	.03	.04	.04	.01	.01	.03	.00	.00	.00
Hours Worked Before Training	—	—	.00	.02	—	—	.02	.00	—	—
Termination Status	.05	.05	.16	.18	.14	.14	.15	.15	.13	.12
Date of Termination	.00	.00	.02	.03	.05	.07	.01	.01	.07	.05
Status-Date Pattern	.05	.04	.17	.19	.18	.20	.15	.17	.20	.19
Long-Term Involvement	.01	.00	.00	.00	.00	.00	.02	.02	.02	.02
Future Orientation	.09	.10	.01	.01	.01	.01	.02	.02	.01	.00
Planning	.05	.05	.04	.04	.01	.02	.00	.00	.00	.01
General Expectancy	.05	.03	.02	.01	.00	.03	.02	.04	.02	.06
Future Pattern	.15	.15	.06	.01	.03	.01	.03	.03	.06	.07

TABLE 5-5

UNADJUSTED AND ADJUSTED ESTIMATES OF EXPLAINED VARIANCE IN WAGE RATE

	Unadjusted R^2	Adjusted R^2
6 Months Before Training		
Preinterview Graduates Excluded, n=85 (Age, Marital Status and Education)	.14	.09
6 Months After Training		
Preinterview Graduates Excluded, n=54 (Race, Marital Status, Education, Termination Status)	.28	.17
Preinterview Graduates Included, n=82 (Race, Marital Status, Education, Termination Status)	.20	.13
July-December, 1971		
Preinterview Graduates Excluded, n=53 (Race, Marital Status, Education, Termination Status)	.30	.19
Preinterview Graduates Included, n=73 (Race, Marital Status, Education, Termination Status)	.24	.16

TABLE 5-6

UNADJUSTED AND ADJUSTED SQUARED PARTIAL CORRELATIONS OF MEASURES OF FUTURE ORIENTATION WITH WAGE RATE

	6 Months Before Training (Preinterview Graduates Excluded, n=85)		6 Months After Training (Preinterview Graduates Excluded, n=54)		6 Months After Training (Preinterview Graduates Included, n=82)		July-December, 1971 (Preinterview Graduates Excluded, n=53)		July-December, 1971 (Preinterview Graduates Included, n=73)	
	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj
Long-Term Involvement	.00	-.01	.00	-.03	.00	-.03	.03	.00	.03	.01
Future Orientation	.10	.09	.01	-.03	.01	-.03	.03	-.01	.01	-.03
Planning	.06	.03	.04	.00	.03	-.01	.00	-.04	.01	-.03
General Expectancy	.02	.01	.01	-.03	.04	.00	.06	.01	.07	.04
Future Pattern	.16	.12	.01	-.10	.01	-.05	.04	-.06	.06	.02

applicants who did not enroll in training had the highest wage rate ($2.99). Placed graduates had a wage rate similar to what they had after training ($2.63). Dropouts ($2.44) and unplaced graduates ($2.24) had wage rates somewhat higher than immediately after training but still lower than the other groups. Marital Status ($Beta^2 = .13$) also had a strong effect. Single men were paid an average $2.38 compared to $2.90 an hour for married respondents. General Expectancy ($Beta^2 = .04$) appeared to contribute some marginal predictive power (Partial $R^2 = .06$), but the direction of its relationship to wage rate is contrary to prediction. High expectations resulted in getting an average of 37 cents less an hour than a respondent with low expectations. It appears that Termination Status is the major determinant of post training wage rates. Placed graduates seem to do consistently well, while the other participants in training seemed to do more poorly than if they had never enrolled. Applicants remaining in the labor market were able to obtain higher wages indicating that experience is a valuable aid to increasing the level of hourly pay.

Due to the limited sample size the estimates obtained for the sample excluding preinterview graduates may not be highly reliable. When preinterview graduates were included in the sample, the Status-date Pattern variable had a greater input ($Beta^2 = .19$) on wage rates in the final six month period. Both General Expectancy ($Beta^2 = .06$) and the Future Pattern variable ($Beta^2 = .07$) seemed to have a more important role in predicting hourly pay in this expanded sample. Other than these differences, most of the other results are similar to those for the smaller sample.

One explanation for the decreasing importance of future achievement orientations may be the elimination of unemployed workers from the wage rate analysis. For instance, over two-thirds of the respondents with a high level of Long-term Involvement and a high-low Planning-General Expectancy configuration were not employed during the final six month period compared to about one-third for the other four groups. Another possible explanation is that once a job is obtained wage rates may be based more on institutional factors such as seniority. Any change in wage rate due to personal future achievement orientations would occur only as a result of changes in jobs.

FIGURE 5 - 3

WAGE RATE IN THREE SIX MONTH PERIODS
FOR FOUR TERMINATION STATUS OUTCOMES

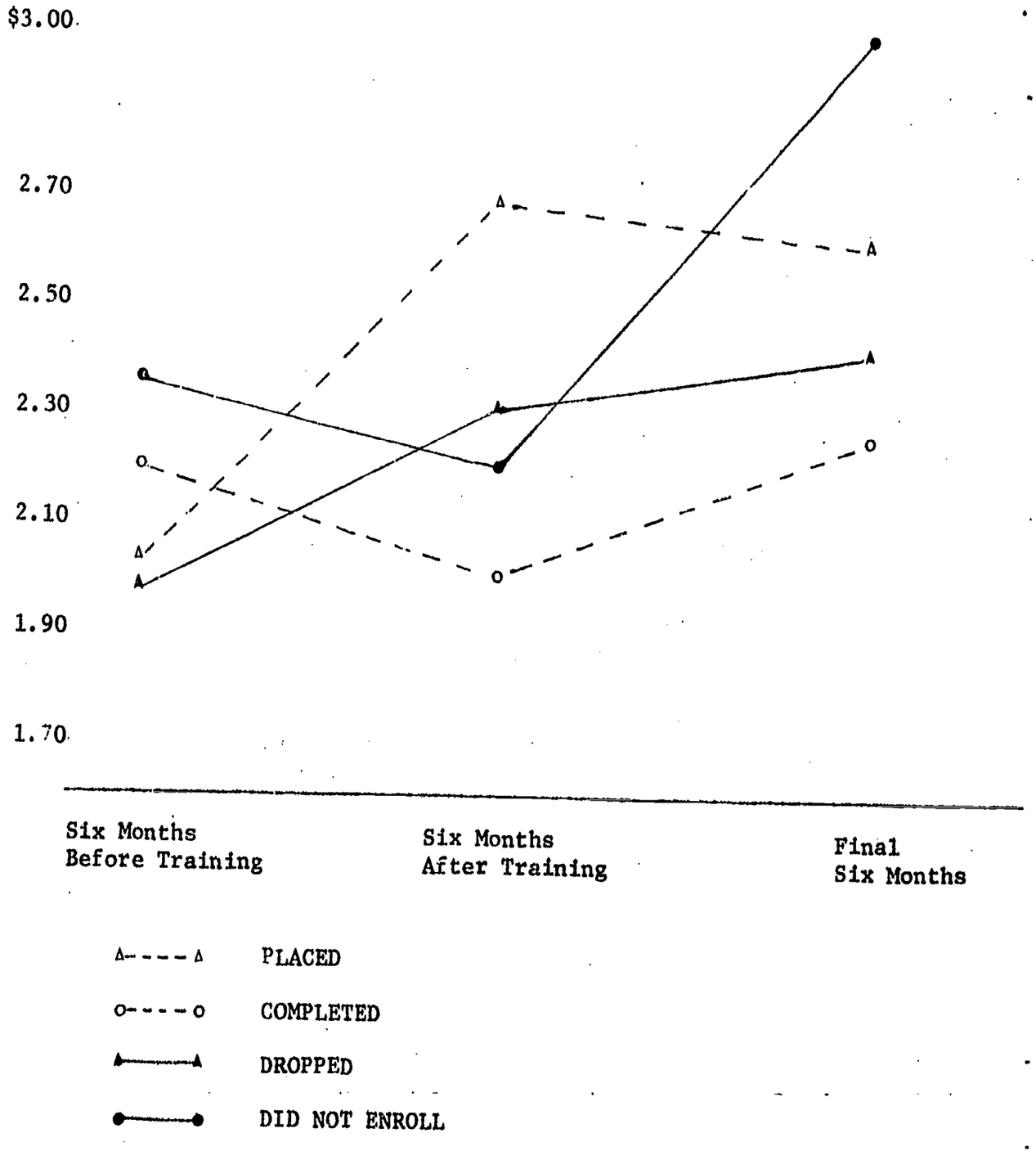
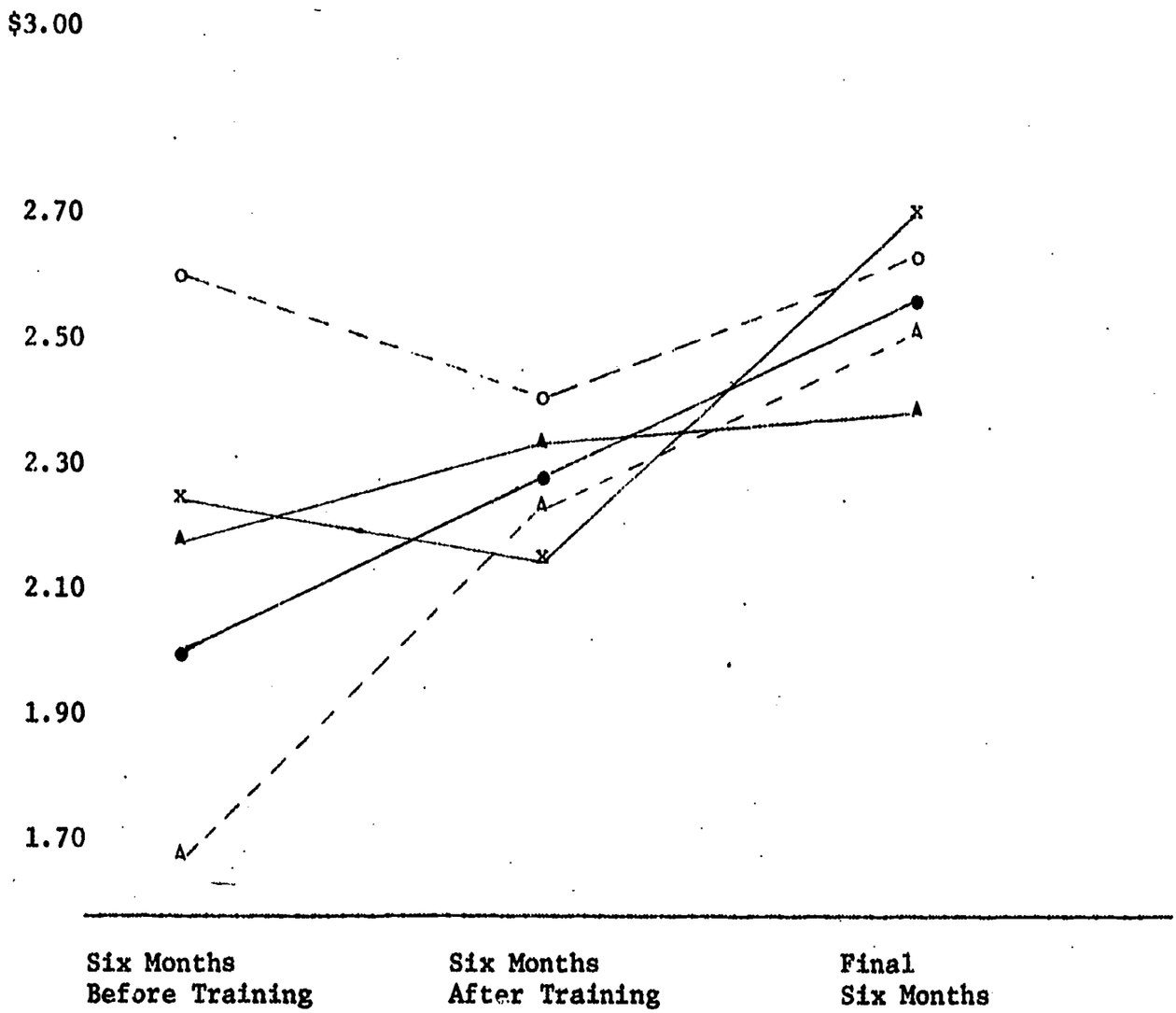


FIGURE 5 - 4

WAGE RATE IN THREE SIX MONTH PERIODS FOR
FIVE CONFIGURATIONS OF THE FUTURE PATTERN VARIABLE



Overall, the Future Pattern variable does have some effect on wage rate (see Figure 5-4). However, the effect is much less than that for hours worked. Its most important effect is prior to training. Jobs with with high wage rates may be perceived as leading to future career goals before experience in training exposes the respondent to other alternative paths to his goal. After training a high wage rate may be perceived as less instrumental to the attainment of future career goals. Other job characteristics such as training relatedness or chances for promotion may become more important. Further research should focus on characteristics of jobs that provide maximum incentive for future achievement and the relationship of performance and advancement on these jobs compared to that for dead-end jobs.

TRAINING OUTCOME

A second major criterion used to gauge the importance of future orientations is the outcome of training experience. Four types of training outcomes were derived from the records of the Skills Center (1) an applicant did not enter training, (2) a trainee did not complete the program (3) a trainee graduated from the program but was not placed in a training related job or (4) a trainee was placed in a training related job immediately after training. A set of four dummy variables was created, one for each possible outcome. A fifth dummy variable was designed to separate those who graduated from the program (unplaced completers and placed graduates) from dropouts and applicants who did not enroll. MCAs were run for each of these five variables.

The demographic and job history predictors did not explain much of the variance in any of the outcomes. Measures of future achievement orientations, on the other hand, have substantial relationships with all of the training outcomes. The single most important predictor of training outcomes is the Future Pattern variable. This composite index has a significant association with nonenrollment, completion of the program without placement and placement in a training related job. Generally, respondents with high scores on both Planning and General Expectancy measures had more placement in training related jobs, a lower rate of noncompletion and less completion of training without placement (see Figure 5-5).

A closer inspection of the relationships of all measures of future achievement orientation with each training outcome is summarized in the following sections. The results of the MCAs for the five outcome variables are presented in Table 5-7. Table 5-8 shows the estimate of the variance explained by the demographic and job history predictors. The marginal effects of measures of future orientation are summarized in Table 5-9. Respondents who had graduated from training prior to the initial interview were excluded from all analyses.

Non-enrollment

Both Long-term Involvement (Eta^2 = .04, $p < .05$) and General Expectancy (Eta^2 = .04, $p < .10$) have a major effect on non-enrollment. The partial correlations of both measures with non-enrollment is also significant at the 10 percent level. Applicants who did not enroll had lower scores on both these measures than respondents interviewed.

The Future Pattern variable also has a significant bivariate association (Eta^2 = .14, $p < .01$) and marginal relationship (Partial R = .15, $p < .01$) with the non-enrollment index. Respondents with low levels on all three components were most likely to have never enrolled in training (55%).

These results do not conclusively show which components or patterns of components lead an applicant to actually enroll in training. However, they do give an indication of the importance of certain predictors. A more extensive sampling of applicants to training programs in a variety of labor markets would permit a stronger inference of the factors which precipitate enrollment. For the present, based on its stability and minimal association with situational factors, the Long-term Involvement index would appear to be a good indicator of the tendency to enroll in training.

Dropout

Only two predictors had much association with the dropout designation. Education ($Beta^2$ = .05) had the strongest association. High school dropouts were less likely to drop out of training. The Future Orientation measure had a moderate association (Eta^2 = .04) with dropping out of training. From these results it would be impossible to make

TABLE 5-7

BIVARIATE ETA^2 AND MULTIVARIATE BETA^2 COEFFICIENTS FROM MCA
FOR 5 DUMMIZED TERMINATION STATUS VARIABLES EXCLUDING PREINTERVIEW GRADUATES (n=131)

	Did Not Enroll		Dropped		Completed		Placed		Finished	
	Eta^2	Beta^2	Eta^2	Beta^2	Eta^2	Beta^2	Eta^2	Beta^2	Eta^2	Beta^2
Age	.00	.00	.01	.01	.02	.00	.00	.00	.01	.00
Race	.01	.01	.00	.00	.01	.01	.04	.04	.01	.01
Marital Status	.02	.01	.01	.01	.02	.01	.01	.01	.04	.04
Education	.02	.02	.04	.05	.01	.00	.03	.04	.02	.01
Hours Worked Before Training	.00	.00	.00	.01	.00	.00	.00	.01	.00	.01
Long-Term Involvement	.04	.05	.00	.00	.04	.03	.00	.00	.03	.02
Future Orientation	.02	.01	.04	.03	.01	.01	.01	.01	.03	.03
Planning	.01	.01	.00	.00	.00	.00	.01	.01	.00	.00
General Expectancy	.04	.04	.01	.00	.00	.01	.07	.12	.05	.06
Future Pattern	.14	.15	.01	.02	.12	.12	.07	.08	.08	.10

TABLE 5-8

UNADJUSTED AND ADJUSTED ESTIMATES OF EXPLAINED VARIANCE IN TERMINATION STATUS
AGE, RACE, MARITAL STATUS, EDUCATION AND HOURS WORKED AS PREDICTORS PREINTERVIEW GRADUATES EXCLUDED (n=131)

	Unadjusted R^2	Adjusted R^2
Did Not Enroll	.04	.00
Dropped	.07	.02
Completed	.03	.00
Placed	.09	.04
Finished Training	.07	.02

TABLE 5-9

UNADJUSTED AND ADJUSTED SQUARED PARTIAL CORRELATIONS
OF FUTURE ORIENTATION MEASURES WITH TERMINATION STATUS

	Did Not Enroll		Dropped		Completed		Placed		Finished	
	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj	Unadj	Adj
Long-Term Involvement	.05	.04	.00	.00	.00	.00	.03	.00	.01	.01
Future Orientation	.02	.00	.03	.02	.01	.00	.01	.00	.02	.01
Planning	.01	.00	.00	-.01	.01	.00	.01	.00	.00	-.01
General Expectancy	.04	.02	.00	-.01	.01	.00	.11	.10	.05	.04
Future Pattern	.15	.11	.02	-.01	.10	.06	.07	.04	.08	.05

any recommendations of how to predict a tendency to not complete training.

One anticipated effect of future achievement orientations on dropping out of the program was not found. Gurin (1968) found that the General Expectancy measure was strongly related to the tendency to voluntarily drop out of the program. This may have been true when dropping out meant an opportunity to find a job. However, in the restricted labor market in the Muskegon area, dropping out of the program was probably not an attractive alternative. Very few dropouts were voluntary. Most were a result of decisions by the program personnel to drop the person rather than vice versa. Consequently, individual future achievement orientations had little impact on individual decisions not to complete the program.

Completion Without Placement

Twice as many respondents with high Long-term Involvement (34%) complete training without being placed in training related jobs compared to (17%) of respondents with low Long-term Involvement scores. Both the bivariate ($Eta^2 = .04$, $p < .05$) and marginal (Partial $R^2 = .10$) effects of this measure on completion without placement are significant. When high Long-term Involvement scores are combined with inconsistent high-low or low-high patterns of Planning and General Expectancy scores, the result is a greater likelihood (44%) of completing training without placement in a training related job. The Future Pattern variable has a significant bivariate effect ($Eta^2 = .12$, $p < .01$) and the effect is also significant when the effects of other predictors are controlled (Partial $R^2 = .10$, $p < .05$). It appears that a strong future motive instigates performance that will result in completion of training, but future plans and expectations are required to direct this motive strength into effective actions that will lead to placement in a training related job.

Placement in a Training Related Job

General Expectancy is the best predictor of placement in a training related job in both bivariate ($Eta^2 = .07$, $p < .01$) and multivariate analyses ($Beta^2 = .12$). Its marginal effect (Partial $R^2 = .11$) is significant at the .01 level. Those with low expectancies were less likely

to have a training related placement (5%) than those with moderate (27%) or high (38%) levels of expectancy. The Future Pattern variable had a similar bivariate effect ($Eta^2 = .08$, $p < .05$) but a less potent marginal effect (Partial $R^2 = .07$) on placement. Men with a combination of high Planning and high General Expectancy scores are more likely to be placed in training related jobs, regardless of the level of Long-term Involvement. A very low proportion of respondents with consistent low scores on all component (9%) or only one high component (11%) were placed in training related jobs.

The key elements in placement appear to be a capacity to plan coupled with a belief that these plans can be effectively carried out. High expectations by themselves do not appear to lead to as high a level of placement as the combination of plans and expectancies.

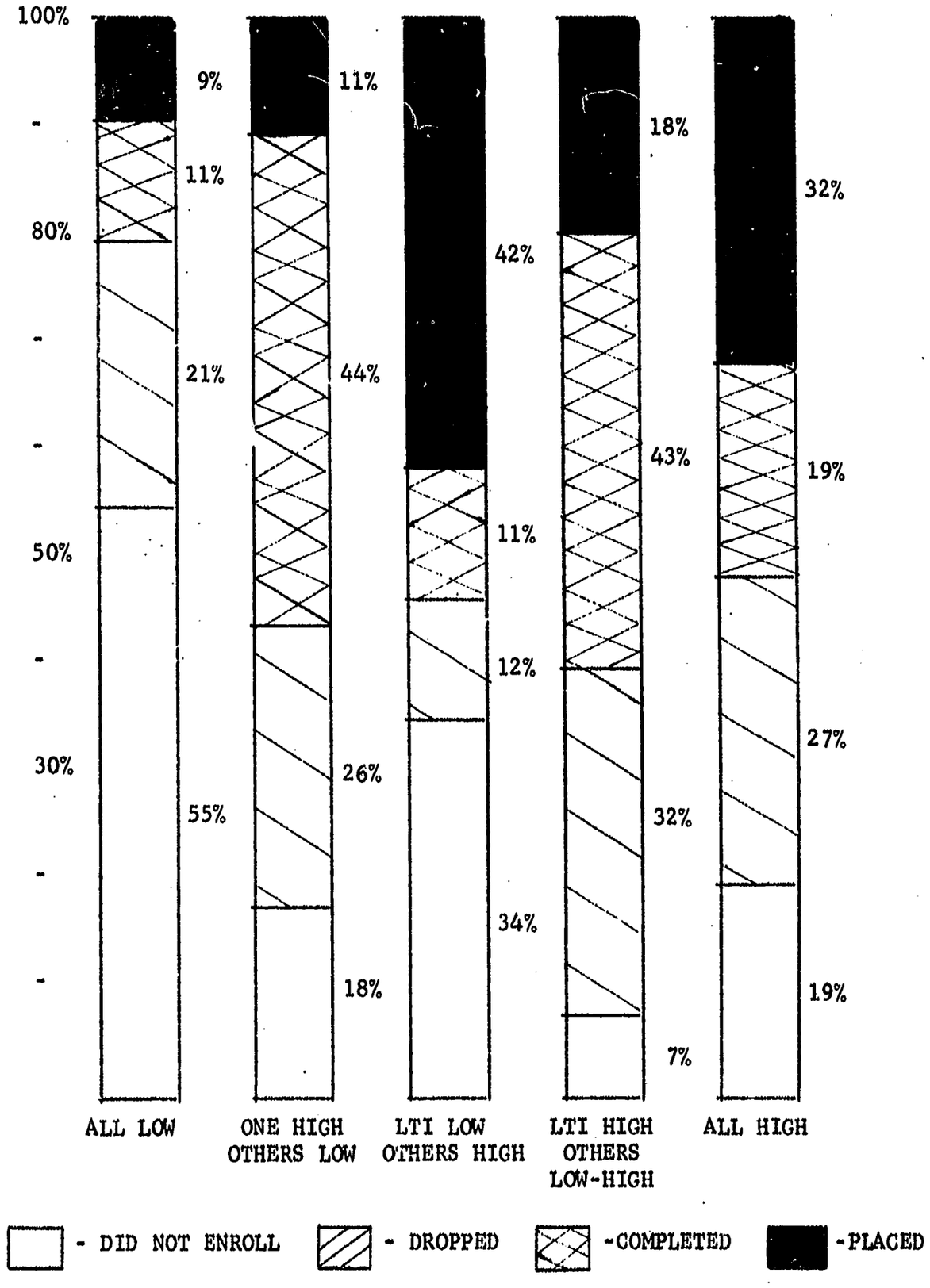
Overall Prediction of Training Outcomes

Future achievement orientations proved to be much better predictors of training outcomes than the demographic and job history variables which had little if any association with outcomes. The best single predictor was the Future Pattern variable (see Figure 5-5) which was associated with three of the four results of training. Perhaps more important was the more detailed analysis of patterns of components that led to a particular status at termination.

A most critical aspect of training is whether the graduate is placed in a training related job. An inspection of the pattern of components associated with more completion of the program compared to patterns associated with a training related placement reveal what may be the key elements in obtaining placement in a training related job. Strong future motives led to a greater tendency to complete training, but did not necessarily result in a training related job. High expectations coupled with plans was associated with placement in a training related job. However, few trainees with this pattern completed training and were not placed in a related job. Thus, strong motives appear to be necessary to sustain the motivation to complete training while plans and expectations are required to make use of opportunity presented by training.

FIGURE 5-5

PERCENTAGES OF TERMINATION STATUS OUTCOMES
FOR FIVE CONFIGURATIONS OF THE FUTURE PATTERN VARIABLE



For example, a trainee with strong future motives, well formed plans, and low expectations has a sufficient level of motivation, can see the connection between training and career plans, but doesn't have the confidence to face challenges that could result in placement in a training related job. On the other hand, strong motives and a sense of personal efficacy but no concept of the connection between training and career goals will not direct actions toward the attainment of placement. Therefore, more attention should be shown toward the development of these plans and expectations for future achievement. With more refinement, the measures of future achievement orientation individually and in combination can help training program personnel predict the probable outcomes of training for particular students and determine which students may need more intensive counseling to help them acquire an effective orientation to training related jobs.

Another point that needs further examination is the indirect effect of measures of future achievement orientation through training outcomes. The preceding analyses of effects of the measures on economic success very likely underestimates the importance of these measures. Since effects of Termination Status were removed before the effects of future achievement orientations were examined, the indirect effects of future achievement orientations were also removed. A further examination of these indirect effects and possible combination of particular patterns of future achievement orientation and training outcomes may suggest ways to further improve the capacity for predicting economic success.

JOB SEARCH

A number of indices were constructed to indicate how a respondent looked for jobs, how he found jobs, what kind of jobs he found and why he accepted or rejected a job. Two of these measures that had the most interesting relationships with future achievement orientations were the number of techniques a respondent used in looking for a job and the self-report of finding a training related job. The Future Pattern variable had significant effects on both types of indices.

The results of these MCA for each type of index are presented below. Eta^2 and $beta^2$ coefficients for each predictor are shown in Table 5-10. The percentage of variance explained by the best set of predictors is

shown in Table 5-11 and the marginal effect of measures of future achievement orientations are presented in Table 5-12.

Job Hunt Methods

Sheppard and Belitsky (1966) reported that the number of methods unemployed blue collar workers used in looking for a job was related to achievement motives and expectations. A similar measure of the number of methods used in the six months before training and in the year and a half between interviews was used for this analysis.

As expected, labor market conditions had a substantial effect ($Beta^2 = .10$) on the number of methods used prior to training. Men in a bad labor market used an average of 3.78 methods compared to 2.54 methods for those in a good labor market. The General Expectancy measure was also significantly related to the number of methods used in this period ($Eta^2 = .06$, $p < .05$) and had a near significant marginal effect (Partial $R^2 = .07$). However, the direction of the relationship was opposite to Sheppard and Belitsky's finding. Men with high general expectancies used only 2.48 methods on the average, versus an average of over 3.50 for men with moderate and low expectancy scores.

There are two possible explanations for these contradictory results. First, the labor markets had distinct differences in the two studies. Although the unemployment rates were similar in both markets, the rate was high but dropping when Sheppard and Belitsky conducted their study, while the opposite was true in the current study. The differential impact of rising versus falling unemployment may have produced the completely opposite sets of findings. Another interpretation is that Sheppard and Belitsky interviewed workers who had been laid off and the present study focused on job training program participants. Potential trainees with high expectations may have directed their attention toward applying to training rather than looking for jobs. Consequently, the opposite pattern of results was obtained. Both the Sheppard and Belitsky and the current results may be valid. The difference is due to the situational context in which the results were obtained.

After training, the combination Status-date Pattern variable is the most important predictor ($Beta^2 = .20$). Graduates placed in 1970 used an average of only two methods in looking for jobs compared to an

TABLE 5-10

ETA^2 AND BETA^2 COEFFICIENTS FROM MCA OF JOB HUNT

	Total Job Hunt Methods Prior to Training (Preinterview Graduates Excluded, n=131)		Total Job Hunt After Training (Preinterview Graduates Excluded, n=83)		Found Training Related Job (Applicants Who Did Not Enroll Excluded n= 87	
	Eta^2	Beta^2	Eta^2	Beta^2	Eta^2	Beta^2
Age	.00	.01	.01	.00	.00	.00
Race	.00	.00	.01	.01	.00	.00
Marital Status	.00	.01	.03	.01	.00	.00
Education	.00	.00	.04	.04	.04	.05
Hours Worked	.00	.00	.04	.04	.00	.00
Termination Status	.03	.03	.07	.10	.16	.17
Date of Termination	.09	.10	.07	.06	.03	.03
Status Date Pattern	NA		.18	.20	.20	.20
Long-Term Involvement	.00	.00	.00	.01	.00	.00
Future Orientation	.02	.02	.04	.03	.00	.00
Planning	.00	.00	.02	.02	.02	.01
General Expectancy	.06	.07	.00	.00	.04	.03
Future Pattern	.03	.02	.03	.05	.07	.08

TABLE 5-11

SQUARED PARTIAL CORRELATION OF MEASURES
OF FUTURE ACHIEVEMENT ORIENTATION AND JOB HUNT

	Total Job Hunt Methods Prior to Training (Preinterview Graduates Excluded, n=131)		Total Job Hunt Methods After Training (Pre-interview Graduates Excluded, n=83)		Found Training Related Job (Applicants Who Did Not Enroll Excluded, n=87)	
	Unadj	Adj	Unadj	Adj	Unadj	Adj
Long-Term Involvement	.00	.01	.00	-.01	.00	-.01
Future Orientation	.02	-.01	.03	.00	.00	-.02
Planning	.00	-.01	.03	.00	.01	-.01
General Expectancy	.07	.05	.00	-.01	.03	.00
Future Pattern	.02	-.01	.06	.00	.10	.05

TABLE 5-12

UNADJUSTED AND ADJUSTED ESTIMATES OF EXPLAINED VARIANCE
IN JOB HUNT METHODS AND FINDING A TRAINING RELATED JOB

	Unadjusted R^2	Adjusted R^2
Total Job Hunt Methods Before Training, n=131 (Age, Education, Hours Worked Before Training and Date of Termination)	.09	.07
Total Job Hunt Methods Between Interviews n=83 (Age, Education, Hours Worked Before Training, Status Date Pattern)	.28	.19
Found a Training Related Job, n=87 (Age, Education, Hours Worked Before Training and Termination Status)	.21	.15

average of over four methods for graduates placed in 1971 and unplaced graduates in 1970 and 1971. It appears that even with placement in a training related job in 1971, it was still necessary to hunt for jobs at some time after placement.

The Future Pattern variable ($Beta^2$ = .05) had the strongest multivariate effect and the squared partial correlation (.06) was close to the 5 percent level of significance. Respondents with either consistent high or low scores on the three components used more methods than respondents with other configurations of components. The interesting aspect of this result is that although respondents with consistently high scores on all components were more likely to have been placed in training related jobs and tended to have higher levels of employment, they also conducted an active job search.

Finding a Training Related Job

Although training records show the nature of training outcome, it is also important to know whether the individual believes his placement is related to the kind of training he received, or whether unplaced graduates eventually find a training related job. In the follow-up interview, former participants in the program were asked if they had found a job that was related to training, regardless of how long the respondent worked on this job.

As expected, Termination Status ($Beta^2$ = .17) obtained from the Skills Center records was the strongest predictor of the report of finding a training related job. However, despite a record of placement in a related job, a third of the "placed" respondents said they had not found a job that was related to their training. The reasons for this discrepancy could be that the relatedness of certain jobs to training was perceived differently by the graduates and program personnel or the graduates may not have accurately recalled that their first job was related to training. Regardless of the reason for this discrepancy, it is mandatory to obtain an accurate judgement of the relationship of skills acquired in training and the types of jobs that are eventually obtained.

Another important finding was that 45 percent of the unplaced graduates eventually found training related jobs compared to only 14 percent

of the dropouts. How these unplaced graduates found related jobs needs to be explored further.

One possible explanation is provided in the relationship of education (Beta^2 = .05) to the report of finding a training related job. Although placement in a training related job was more common for respondents who had not completed high school, about 20 percent more high school graduates reported finding a related job. Apparently high school graduates were able to find related jobs on their own.

The Future Pattern variable also had a substantial bivariate relationship (Eta^2 = .07) with the self report measure as well as a near significant marginal effect (Partial R^2 = .10). Only 23 percent of respondents with consistently low scores on all components found jobs that utilized skills from training compared to 70 percent of respondents with low long-term involvement and high Planning and General Expectancy scores. The other groups had about a 40 percent success rate in finding jobs associated with training.

There is some difference in the relationship of the Future Pattern variable with placement and self-report indices. The group with consistent high scores on all components had relatively the same degree of placement as the low Long-term Involvement, high Planning and high General Expectancy group. However, respondents in the latter group reported a much higher percentage of locating a training related job. These results suggest that an important factor in determining location of a job related to training is the configuration of the future achievement components especially plans and expectations. Future achievement orientation may be even more important for graduates who were not placed by the training program.

SUMMARY

The Multiple Classification Analysis program was used to estimate the power of demographic characteristics, job training outcomes, labor markets conditions, and job history in the prediction of criterion measures of economic success, training outcomes and job search. Measures of four components of future achievement orientation and a pattern variable formed from the combination of components were then included in MCA's to assess the marginal predictive power of each measure. The aims

of the analyses were (1) to investigate the predictive power of the measures of future orientation over the range of criteria, taking other predictors into account and (2) to compare the predictive power of the measures of future achievement orientation to that of the other classes of variables.

Predictive Power of Measures of Future Orientation

Three of the measures of individual components of future achievement orientation did not have much effect. Long-term Involvement had moderate beta[2] coefficients only for the training outcomes of non-enrollment and graduation with placement. The forced choice Future Orientation measure was a strong predictor of pre-training wage rates and had moderate associations with dropping out of training and the number of methods used to look for a job after training. None of these measures appears to have much general predictive power and individually they would probably not be of much value for either research or individual counseling.

The General Expectancy measure was strongly related to a variety of criteria including both employment and wage rate in a six month period over a year after training, non-enrollment in training and placement in a training related job. The number of methods used in looking for jobs before training and finding a training related job were also related to General Expectancy scores. The relationship of the General Expectancy scale with this range of criteria indicates its utility in research and suggests it may be very beneficial to develop a more refined measure for individual predictions. It is especially encouraging to note that this expectancy component had a strong relationship with long term economic success and finding training related jobs.

The most powerful and general predictor of all criteria was the combination of the Long-term Involvement, Planning and General Expectancy indices. This pattern variable had high levels of association with employment in the long run, and wage rates before and after training. Three training outcomes, non-enrollment, completion without placement, and placement in a training related job were related to this measure. It also predicted success in finding a training related job, and the number of methods used to hunt jobs after training. Clearly this

measure has a great value for further research. Even more important is the finding that different patterns of components are associated with success. Knowledge of patterns of future orientation and their relationship with different forms of success and types of instrument activities should aid counselors in helping trainees maximize their motivation and consequently their subsequent levels of performance.

Patterns of Future Achievement Orientation Associated with Success

In order to assess the importance of a particular pattern of components, it was necessary to determine how much scores for respondents with this pattern deviated from the mean of the dependent variable for the total sample. Therefore average Z scores were calculated for each subgroup and the most important are presented in Table 5-13.

From this table it is clear that a consistent pattern of high components results in generally positive outcomes, including high employment in the long run, good wage rates prior to training, placement in a training related job after graduation, more varied methods of looking for jobs and finding a job that is related to the skills learned in training. On the other hand, a consistent pattern of low scores seems to have a detrimental effect on employment, training outcomes and the chances of finding a training related job. These patterns of results are clear and conform to the a priori hypotheses. Strong motives, well formed plans and high expectations lead to efficient performance. Low scores indicate a low level of motivation resulting in very inefficient performance.

The other patterns require a closer inspection. The configuration with one high component was originally assumed to be an unrealistic defensive orientation. The high level of employment in the long run appears to refute this hypothesis. There is some evidence of a defensive orientation in the less comprehensive search for jobs after training and the tendency to complete training without placement. However, at this time the meaning of this pattern is unclear.

The second intermediate pattern of a low motive level, effective plans and high expectancies seems to have a very strong association with obtaining a training related job. Such jo's appear to compensate for

TABLE 5-13

STANDARDIZED DEVIATION SCORES
FOR FIVE CONFIGURATIONS OF THE FUTURE PATTERN VARIABLE

	All Low	One High	LTI Low	LTI High Low-High	All High
Economic Success					
Employment					
Before Training	-0.23	-	-	+0.22	-
After Training	-	-	-	-	-
July-Dec.,1971	-0.22	+0.39	-	-0.47	+0.39
Wage Rate					
Before Training	-	-	-	-0.55	+0.52
After Training	-	-	-	-	-
July-Dec., 1971	-	-	-0.34	-	-
Training Outcome					
Did Not Enroll	+0.68	-	+0.20	-0.41	-
Dropped Out	-	-	-0.30	-	-
Completed	-0.34	+0.41	-0.34	+0.41	-
Placed	-0.31	-0.26	+0.48	-	+0.24
Job Search					
Pretraining Job Hunt Methods Used	-	-	-0.22	-	-
Posttraining Job Hunt Methods Used	-	-0.27	-	-	+0.34
Found a Training Related Job	-0.39	-	+0.61	-	-

the lower wage rate earned by this group. Such a configuration may imply that action when undertaken is effective in carrying out plans. However, the low motive component and the apparent lack of increased employment or wage rate suggests that the absence of an energizing component may decrease the capacity to take advantage of the plans and expectations.

High motive levels combined with an inconsistent pattern of plans and expectations produces an irregular pattern of employment; high prior to training but low in the long run. Despite high employment before training wage rates were low. There was also a tendency to not undertake actions that resulted in positive outcomes such as obtaining placement. This suggests that although some actions may be initiated the performance is not efficient. The respondent may not see a connection between his actions and goals or may lack the sense of efficacy to undertake challenging courses of action that could lead to future goals. Both patterns seem to produce an irregular pattern of performance that does not seem to be very functional.

Although tentative and incomplete, these initial assessments of patterns of future achievement orientation provide an insight into areas where counseling might be effective. For instance a student with strong motives and high expectations may need to be shown the connection between what he is doing now and what he hopes to do in the future. Confidence can be bolstered for a trainee with high motive levels and well formed plans, perhaps by guaranteeing him placement after training or suggesting he enroll in an OJT program. The main thrust of this assessment would be the placement of emphasis in counseling or weak areas or the selection of a program where the pattern of future achievement motivations will interact with the situational factors in the program to maximize the effects of the program.

Comparative Predictive Power of Measures of Future Achievement Orientation

Another key question is whether future achievement orientations are important determinants of success compared to other kinds of predictors. Termination Status, education, General Expectancy and the Future Pattern variable are the most powerful predictors of the majority of criterion

variables. Table 5-14 presents a summary of the beta[2] coefficients for these four variables. Indices that were the most important predictors of a criterion are designated by an asterisk.

Termination Status was the most potent determinant of five of the nine analyses in which it was included. The Future Pattern variable was most effective in four of the eleven analyses in which it was used. Education and General Expectancy each had the strongest effect in only one analysis. This comparison shows that Termination Status is clearly the best predictor overall. However, the Future Pattern variable also has potent and general effects. Since the Future Pattern index is related to training outcomes, its overall importance may be underestimated in a multivariate analysis. The indirect effects of future achievement orientation through training outcome may become obscured.

TABLE 5-14

COMPARISON OF BETA^2 COEFFICIENTS
FOR BEST PREDICTORS OF ALL DEPENDENT VARIABLES

	Education	Termination Status	General Expectancy	Future Pattern
Economic Success				
Employment				
before Training	.00	.01	.02	.03
After Training	.07	.15*	.00	.03
July-Dec.,1971	.04	.06	.03	.12*
Wage Rate				
Before Training	.03	.05	.03	.15*
After Training	.04	.18*	.01	.01
July-Dec.,1971	.00	.12*	.06	.07
Training Outcome				
Did Not Enroll	.02	NA	.04	.15*
Dropped Out	.05*	NA	.00	.02
Completed	.00	NA	.01	.12
Placed	.04	NA	.12*	.08
Job Search				
Pretraining Job Hunt Methods Used	.00	.03	.07	.02
Posttraining Job Hunt Methods Used	.04	.10*	.00	.05
Found a Training Related Job	.05	.17*	.03	.00

* Strongest predictor in the MCA

OVERVIEW AND IMPLICATIONS

This research had four main purposes. The first was the development of a comprehensive description of the concept of future orientation. A second goal was the construction of meaningful measures of the construct of future achievement orientation. A third aim was the discovery of factors that appeared to function as determinants of these orientations. The final purpose was the evaluation of the predictive validity of the measures for job training outcomes and economic success.

The first chapter focused on a number of important conceptual issues in the analysis of future orientations. Three of the most important problems are the multidimensionality of the future construct, the connection of immediate activities to future goals in contingent paths and the impact of the structure of opportunities on future orientations. Previous research and theory suggest that the future construct is composed of four components: a relatively stable motive, a capacity or tendency to plan, the incentive to engage in future related activities and expectations about the future. The concept of contingent paths introduces the idea that motivation and consequently performance will generally increase when immediate activities are linked to future goals. This concept requires a thorough consideration of how real world opportunities impinge upon the perception of a connection of immediate action and future goals. These three issues underlie a number of the results obtained and form the underpinnings of the interpretations of these results.

In order to investigate these issues further and meet the main aims of this research a number of design strategies and data analysis techniques were employed. The original study employed a quasi-experimental design where groups of respondents were interviewed at one of four crucial points in the training cycle: during application, upon enrollment, near completion and after graduation. A year and a half later 70 percent of these respondents were reinterviewed. It was necessary to account for two major differences in experience between the two interviews. Four outcomes of the training program produced a number of important differences among respondents: (1) non-enrollment in training,

(2) dropping out of the program, (3) completion of the program without placement in a training related job and (4) placement in a training related job. Other sources if differences were the three patterns of labor market conditions before and after training: (1) good both before and after training, (2) good before entry but poor after leaving the program and (3) poor at both times. A pattern variable was also constructed to control for interactions between these two factors. A Multiple Classification Analysis program was used to assess relative contributions of different classes of variables in a multivariate framework. Age, marital status, race, education, and job history as well as the training outcome and labor market conditions were used as the principal non-future predictors in all analyses.

Projective, semi-projective and two alternative forced-choice measures were constructed to measure motive, planning and expectancy dimensions of future achievement orientations. Only the projective and semi-projective measures of planning had much association across the three methods used. Consequently, individual measures of each component were selected on the basis of internal consistency, test-retest stability and a positive association with achievement related behavior. The forced-choice measure of Future Orientation met all criteria. A projective measure of Long-term Involvement appeared to be a satisfactory indicator of a motive disposition. The planning dimension was represented by the configurally scored combination of projective instrumentality and a report of the anticipated number of steps required to attain a future goal. Expectations were tapped by the forced choice General Expectancy measure. These latter three measures were combined into a configurally scored Future Pattern variable. The five categories in this variable represented patterns of (1) low scores on all components, (2) high scores on the three dimensions, (3) two components low with the other high, (4) low motive strength with high planning and expectancy components and (5) a high motive component with inconsistent levels of plans and expectations.

Multiple Classification Analyses were used to assess the effects of a variety of predictors on both the initial and reinterview levels of the four measures of individual components. The point in the training cycle where the respondent was first interviewed was the only factor

that had much effect on the initial levels of Planning and General Expectancy scales. In the follow-up, the combined impact of training outcomes and labor market conditions had a dramatic effect on all measures, even the supposedly stable Long-term Involvement index of motive strength. The greatest decreases in scores on all measures were found for graduates who were not placed in training related jobs, particularly those who graduated when unemployment rates were high.

The predictive validities of the individual measures of future achievement orientations and the Future Pattern variable were assessed for three criteria: training outcomes, economic success, and job search activities. Individual measures of components and the Future Pattern variable had very substantial effects on training outcomes. In general, a higher level of future achievement orientation led to an increased probability of placement in a training related job. Economic success in finding work was a function of demographic factors prior to training and Termination Status immediately after training. However, over a year after graduation, the Future Pattern variable was the strongest predictor of employment. Measures of future achievement orientation also had strong associations with wage rates prior to training, but only the Future Pattern variable had much effect over a year after training. As with employment, Termination Status had the most important effect on wage rates immediately after training, but unlike employment this effect was maintained over a year after training. The Future Pattern variable also had a relatively strong relationship with the number of methods used to search for jobs after training and a self-report of finding a training related job.

These results suggest a number of important implications for training programs and manpower policy. It is clear from these results that individual future achievement orientations do have a substantial impact on economic success in this study. It is equally clear that program outcomes and environmental opportunities conducive to the attainment of future goals lead to increased economic success and higher levels of future achievement orientation. The multidimensional nature of the future construct also permits consideration of a variety of approaches to instigate and direct individual activities toward realistically obtainable future goals.

A particularly encouraging result is the association of future achievement orientation scales with a variety of indices of functional economic behavior. Morgan (1974) reported that attitudinal and motivational constructs had little relationship to levels or changes of income in his longitudinal study of heads of low-income households. The results of the current study show that individual motivational factors are important. One explanation for these different patterns of results is that family dynamics were not as salient for participants in a training program. The effects of future motivations may be confined to educational program or perhaps to only the Muskegon program. The results of this study need to be replicated in a more general sample before definitive claims of the importance of future achievement orientation can be presented.

Despite these reservations, particular results should be carefully considered. The outstanding aspect of this study is the finding that the future constructs were related to employment over the long run while the effects of training outcomes appeared to diminish. Since most previous evaluations have concentrated on the short run payoffs of training, the effects of individual motivations may not have been apparent. The current findings imply that evaluations should focus more on long-term outcomes and give more attention to the increasing importance of individual motivations in cumulative achievement over time.

In addition, past research may have underestimated the overall impact of these motivations. The present analysis showed that future achievement orientations were related to a variety of intermediate activities instrumental to final economic success, such as job training outcome and job search methods. It seems that a more detailed analysis of the indirect effects possibly by estimation of path coefficients would be a fruitful means of developing a more comprehensive evaluation of the impact of future orientations.

Another reason for the positive findings of this research may have been the multidimensional measurement of future achievement orientations. The pattern variable appeared to be related to indices where individual component measures had no association. These results support the conceptions of Heckhausen (1967) and Veroff, et al. (1974) that achievement motivation is a multidimensional construct. The multifaceted approach

to evaluation of individual differences also suggests a variety of strategies for developing training programs.

Gurin (1970) suggested that training programs could focus on expectancies of participants. The present study shows that plans and motives are also important in training. The Miller, et al. (1960) concept of Plans indicates that a concrete outline of the path to a goal can function just as well as more cognitive representations. Therefore, programs might develop ways to give clients a definitive step by step map of alternative paths to their goal. Changing the motive level is a more complex process. McClelland and Winter (1973) claim that intensive training does increase the level of n Ach. However, this program may be difficult to implement on a large scale.

A complementary approach is the placement of clients in agencies where the effects of person/situation interactions discussed by Bates, Harrison and Gordon (1973) will be the most beneficial. For instance, an On-the-Job program may be the most productive for a client who has a strong motive to achieve but no plans of how to achieve his goal and little sense of personal efficacy. More motivated trainees with well developed plans and a stronger sense of efficacy may be able to use skills learned in an institutional setting and then find jobs mostly on their own. The high motivational levels of dropouts reported by Gurin (1968) may be one indication that clients with high motivations can find success through their own efforts with minimal assistance by an agency. This suggests a more open structure of programs may help a client get what he needs from a program and then continue on his own.

These kinds of recommendations are based on the underlying principle that all programs should be designed to help a client reach particular goals. In this study, it was dramatically demonstrated that graduates placed in training related jobs did much better than those who completed the program and were not placed. The costs to this latter group were not only economic but also psychological. Employment and the level of future achievement orientations dropped substantially after training. A more general implication of the effect of not connecting programs to goals is presented by Berg (1971). He argues that people are overtrained for the jobs that are currently available. Another indication of this overtraining and consequent overaspiration was found

in the Douvan and Adelson (1966) study where 50 percent of high school students aspired to and planned to train for professional or semi-professional jobs. The results of the current study demonstrate empirically the devastating effect of not reaching a goal because the goal is just not available. Programs must be designed to help participants obtain goals that are realistic and attainable. It is the task of economic policy makers and the business community to provide sufficient meaningful goals to maximize the benefits that can be derived from a highly motivated labor force. When it seems likely that clients may not reach their goals immediately following a program, some method of continuing contact would be necessary to help clients maintain their motivation and eventually reach their goals.

In summary, the purpose of this report was to present a new attack on the problems associated with economic behaviors. The nature and scope of this research preclude any definitive recommendations. On the other hand the study did generate a number of findings that do have substantive implications for training programs, employment services and manpower policy. These findings need to be replicated and explored in more general and detailed research efforts. Some initial steps toward this goal should be (1) the refinement of measurement instruments, (2) analyses of the multidimensional nature of motivation, and (3) the study of how future related motives, plans, incentives and expectations lead to effective economic behavior in a cross-section of the labor force.

APPENDIX A

Measurement Instruments

INTRODUCTORY PROJECTIVE STORY INSTRUCTIONS P468550

First, I'm going to ask you to use your imagination to complete some stories. I'll read you a short story with some parts left out. When I come to a part that's left out, you tell me the word or sentence that you would put in.

For example, if I said: Sam caught the _____and ran for a touchdown, what word would you put in the blank? (ACCEPT ANY ANSWER AND SAY "Mm-hmm.")

Let's try a story.

..... Tell me what you want to put into the missing parts. It can be a word or a whole sentence.

(READ THE PASSAGE BELOW, SAYING "Blank" FOR EACH "_____." STOP AT THE END OF EACH SENTENCE FOR THE RESPONDENT TO SUPPLY A WORD OR WORDS TO PUT INTO THE BLANK. IF R HESTITATES OR SAYS "Don't know," GIVE HIM SOME ALTERNATIVES (SEE BELOW) AND ASK HIM TO CHOOSE AND RESTATE ONE OF THEM. REINFORCE ALL ADEQUATE ANSWERS.)

REINFORCEMENTS: Yes Okay I see Mm-hmm All right

A man is _____ on a bus. The bus just passed a large brick
(1)

_____. The time is _____o'clock. He is going to _____
(2)

_____,because _____.

He feels _____.

The most important thing that will happen to him today is that _____

_____.

POSSIBLE ANSWERS IF R DOESN'T HAVE ANY

(1)	(2)
Riding	Factory
Sitting	Wall
Travelling	Schoolhouse

AFTER ADEQUATE ANSWER—	
YES	O.K.
I SEE	Mm-Hmm

P468550

PROJECTIVE ITEMS

Another thing we want to find out is what people think of situations that may come up in life. I'm going to show you some pictures of these situations and ask you to think of stories to go with them. The situations won't be clearly one thing or another, so feel free to think of any story you want to.

(SHOW PICTURE 1, "TWO MEN AT A MACHINE")

For example, here's the first picture. I'd like you to spend a few moments thinking of a story to go with it. To get at the story you're thinking of I'll ask you questions like: Who are these people? What do they want? and so on. Just answer with anything that comes to mind. There are no right or wrong answers. (RECORD ANSWERS VERBATIM) (ASK BOTH SUBQUESTIONS TOGETHER) (DO NOT REPEAT SUBQUESTIONS)

P1. Who are these people? What are they doing?

P1a. What has led up to this? What went on before?

P1b. What do they want? How do they feel?

P1c. What will happen? How will it end?

AFTER ADEQUATE ANSWER—	
YES	O.K.
I SEE	Mm-Hmm

P468550

PROJECTIVE ITEMS - continued (SHOW PICTURE 2 "MAN AT DESK")

Here's another picture.

P2. Who is this person? What is he doing?

P2a. What has led up to this? What went on before?

P2b. What does he want? How does he feel?

P2c. What will happen? How will it end?

AFTER ADEQUATE ANSWER	
YES	O.K.
I SEE	Mm-Hmm

P468550

PROJECTIVE ITEMS - continued

Now, instead of showing you a picture, I'll describe someone, then ask you questions about why he acts that way.

P3. Ray works much harder than most people.

P3a. Why do you think he does this?

P3b. What does he want? How does he feel?

P3c. What will happen? How will it end?

AFTER ADEQUATE ANSWER	
YES	O.K.
I SEE	Mm-Hmm

P468550

PROJECTIVE ITEMS - continued

Here's a sentence about someone else.

P4. After first term final exams, Phil finds himself at the top of his his high school class.

P4a. Why do you think this happened?

P4b. What does he want? How does he feel?

P4c. What will happen? How will it end?

AFTER ADEQUATE ANSWER	
YES	O.K.
I SEE	Mm-Hmm

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SEMI-PROJECTIVE

Now, here is a sentence about how you think about the future. It needs to be completed. Tell me how you would finish it.

SP1. In the next ten years, I'm going to _____. How would you finish this? (VERBATIM RECORD OF R'S ANSWER)

_____

_____

_____

SP1a. Anything else? _____

_____

(PROBE, AS NECESSARY, FOR TWO SPECIFIC FUTURE GOALS, USE FIRST TWO SPECIFIC GOALS MENTIONED)
FIRST GOAL: _____ SECOND GOAL: _____

(POSSIBLE PROBES): Can you tell me more about _____?
What do you have in mind when you say? _____?

(FOR EACH GOAL MENTIONED, ASK):

	FIRST GOAL	SECOND GOAL
SP2. What will you have to do to (get/do).....?		
SP3. Are you doing anything now to (get/do)...?	☐Yes ☐No-GO TO SP4 ↓ What are you doing?	☐Yes ☐No-GO TO SP4 ↓ What are you doing?
SP4. Are you concerned about whether you will be able to (get/do)...?	☐Yes ☐No-GO TO SP5 ↓ What are you concerned about?	☐Yes ☐No-GO TO SP5 ↓ What are you concerned about?
SP5. What are your chances of (getting/doing)...?		

FORCED CHOICE MEASURES

FUTURE ORIENTATION

T3. Many trainees think about what kind of job they can get after training. Did you think mainly about getting a job you were trained for, or the training might lead to better and better jobs?

_____A job you were trained for or __x__ Better and better jobs.

J2. Some people like different types of jobs, would you choose a job where you did not have to worry about being fired or laid off, or one where you had a good chance for promotions and raises?

_____were not fired or laid off, or __x__ had chances for promotion and raises.

AR4. If someone was going to give you a gift, would you rather get an inexpensive gift now, or wait a year and get a more expensive gift?

_____inexpensive gift now, or __x__ a more expensive gift in a year.

G3. When you succeed in reaching a goal that is important for your long-range plans: do you mainly relax and enjoy it, or do you mainly think about reaching more such goals?

_____Relax and enjoy it, or __x__ think about more goals like it.

TRAINING EXPECTANCY

T1. There can be many reasons why people enroll at the Skills Center; some decide for themselves, others go because someone told them they should get training. In your case was it

__x__ mostly your decision or _____someone said you should enroll at the Skills Center.

T9. If the instructor said you were doing good work, would you feel good mostly because someone knew you had been working hard, or more because you knew you had learned something?

_____someone knew you worked hard, or __x__ you learned something.

T10. Have you usually felt pretty sure the training would work out the way you expected, or have there been times when you haven't been sure about it?

__x__ pretty sure, or ____haven't been sure training would work out.

TRAINING EXPECTANCY (Cont).

T11. Do you think you could do most things as well as the other trainees or could most of the other trainees do better than you?

__x__ as well as other trainees, or ____ others could do better.

JOB EXPECTANCY

J7. Do you think getting a good job is just a matter of luck, or in your case getting a good job has little or nothing to do with luck?

_____ a matter of luck, or __x__ has little or nothing to do with luck.

J9. The training programs teach skills necessary to get jobs. In your case do you think you can get the job you want with the skills you learned or do you think other things might keep you from getting the job you want?

__x__ can get the job you want, or _____ other things keep you from getting a job.

J13. If you had to get a new job now, would you feel very confident you could get the job you wanted, or aren't you sure you could get the job you wanted?

__x__ very confident, or _____ not sure you could get the job you wanted.

GENERAL EXPECTANCY

G10. Have you usually felt pretty sure your life would work out the way you want it to, or have there been times when you haven't been sure about it?

__x__ pretty sure, or _____ haven't been sure life would work out the way you wanted it to.

G11. Do you think it's better to plan your life a good way ahead, or would you say life is too much a matter of luck to plan ahead very far?

__x__ plan ahead, or _____ there is too much luck to plan.

G12. When you do make plans ahead, do you usually get to carry out things the way you expected, or do things usually come up to make you change your plans?

__x__ things work out as expected, or _____ you have to change plans.

GENERAL EXPECTANCY (Cont).

G13. Some people feel they can run their lives pretty much the way they want to; others feel the problems of life are sometimes too big for them. Which one are you most like?

__x__ you can run own life, or _____ problems of life are too big.

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