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Enlistment Intentions and Behaviors: Youth and Parental Models

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This report presents results of efforts to develop models of the enlistment decision-making process, focusing on the enlistment intentions and behaviors of 16- to 20-year-old American males. It is based on survey data collected between October 1986 and January 1988 from 2,731 pairs of young men and their parents as part of the Army Communications Objectives Measurement System (ACOMS) survey, and augmented by enlistment data obtained from Military Entrance Processing Station (MEPS) data files.

The modeling effort expanded the hierarchy of effects model, proposed by Fishbein and Ajzen, and used to develop the ACOMS survey. Separate models of Army enlistment were developed based on youth and linked parent-youth data. Additional analyses developed models of general military enlistment, again utilizing youth and linked parent-youth data.

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Enlistment Intentions and Behaviors: Youth and Parental Models

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FOREWORD

Data from recruiters reveal a decline in young people's propensity to enlist, prompting concerns about meeting enlistment goals. The U.S. Army Recruiting Command is attempting to counter this decline. This report documents efforts to use data obtained by the Army Communications Objectives Measurement Systems (ACOMS) survey to test the hierarchy of effects model proposed in the original, unfinished ACOMS project by means of structural equation model analysis. The model utilizes ACOMS survey responses of male youth and their parents. It augments the survey data by including enlistment data from the Military Entrance Processing Station (MEPS) Data Edit files.

ACOMS was developed to meet the needs of Army policymakers and operational managers through a cooperative effort with a Special Advisory Group (SAG) of representatives from the staffs of the Office of the Deputy Chief of Staff for Personnel, the U.S. Army Recruiting Command, the Office of the Chief of the Army Reserve, and the Army National Guard. The U.S. Army Research Institute (ARI) participated in this cooperative effort as part of an ongoing research program designed to enhance the quality of Army personnel.

The ACOMS survey was conducted from October 1986 until January 1988. Results of the survey effort were published in April 1988.

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ENLISTMENT INTENTIONS AND BEHAVIORS: YOUTH AND PARENTAL MODELS

EXECUTIVE SUMMARY

Research Requirement:

To improve Army recruiting practices by better understanding the enlistment decision process.

Procedure:

This research effort expands the analyses previously conducted on data from the Army Communications Objectives Measurement System (ACOMS). This research project developed several models of enlistment intentions and behaviors, using ACOMS survey data and military applications records.

The analytic data set used for these analyses consisted of 2,371 pairs of young men and their parents, who were interviewed by telephone between October 1986 and January 1988. The young men were selected using random digit dialing methods, which produces a national representative sample of the eligible population. After interviewing the young men, interviews with one parent were conducted. At the time of the interview, these young men were between the ages of 16 and 20, were high school graduates or currently enrolled in high school or college, and had not previously served in or been accepted for military service.

The analyses were guided by the theory of reasoned action, a social psychological framework developed by Fishbein and Ajzen (1975), for the purpose of understanding behavioral choices. Adapting the theory of reasoned action to the military enlistment context, a conceptual model of enlistment intentions and behavior was developed.

The research started with descriptive analyses of the youth and parents, operationalizing model constructs with variables available in ACOMS, and exploring expected relationships among the constructs. Subsequently, hypothesized relationships among the constructs in the conceptual model were specified and tested iteratively using covariance structural analyses. LISREL software was used in these analyses.

Two basic models were developed: a youth model and a linked youth and parent model of enlistment. Each basic model was estimated for Army and military enlistment.

Findings:

The analyses produced very similar empirical models for Army and military enlistment. The youth model provided strong support for the logic behind the theory of reasoned action. Youth attitudes toward the Army and their perceptions of parental support for enlistment were highly predictive of their enlistment intentions and actual behaviors. The linked youth and parent model uncovered a different dynamic from that suggested by the theory of reasoned action. The empirical results suggested that parents may influence youth enlistment behaviors directly, without affecting their perceptions or attitudes. Further refinement of the linked model is needed to understand the relationships between parental factors and youth behaviors.

Utilization of Findings:

The models contribute important new understandings of the forces involved in youth decisionmaking related to enlistment in the military, particularly with regard to the key roles that parents play in this process. The findings have practical application for recruiter training and practice. In addition, the finding imply that Army communications should emphasize the social desirability of the enlistment option and should encourage parents to discuss this career path with their sons.

ENLISTMENT INTENTIONS AND BEHAVIORS: YOUTH AND PARENTAL MODELS

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1. Introduction and Overview

Introduction

Within the general context of today's downsizing military, interest in the recruiting market remains high. Over 200,000 recruits are still needed to fulfill the military's annual active duty recruiting mission. Recently, there has been concern that the pool of young people interested in joining the military may be shrinking. Anecdotal reports from recruiters indicate increasing difficulty in meeting recruiting missions. The Youth Attitude Tracking Study (YATS), an annual survey conducted for the Department of Defense, shows that the level of enlistment propensity (a measure of enlistment interest in the population) among youth between 16 and 24 years old has been declining steadily over the past few years. A recent report (Asch and Orvis, 1994) shows the same declining trend among "higher quality" youth (i.e., those predicted to score in the upper half of the Armed Forces Qualifying Test, or AFQT) who are of most interest to the military. It is particularly worrisome that the largest decline appears to be among black youth, who have had a high interest in enlistment.

This report represents one of several efforts currently underway to attempt to obtain a better understanding of the forces that affect enlistment propensity. The focus of this study is young men's intentions to enlist in the Army, or Army enlistment propensity, and enlistment behavior. The study develops several empirically derived models of enlistment interest and actual behavior, based on survey data from a nationally representative sample of young men and their parents, combined with military personnel data on applications to the military. The survey was called the "Army Communications Objectives Measurement System (ACOMS)," otherwise known as Project Image Watch-Dog.[1]

A substantial body of research on the enlistment decision-making process, reviewed by Wilson, Gay, Allen, and Celeste (1988) and Barnes, Dempsey, Gaskins, Knapp, Lerro, and Schrayer (1991), has provided guidance to the military recruiting community over many years. Much of the research has focused on particular elements of the enlistment decision. For example, the series of reports from the YATS surveys conducted by the Department of Defense has found remarkable consistency in the demographic characteristics associated with youth interest in joining the military. Various economic studies (e.g., Gilroy, 1986; Horne, 1986) have shown the impact of labor market conditions on youth propensity for military enlistment. The Army has maintained a longstanding interest in understanding the enlistment motivations of new recruits (Elig, Johnson, Gade and Hertzbach, 1984; Pliske, Elig, and Johnson, 1986).

This study adds to this body of research in several ways. First, it supplements research that has focused on demographic and economic variables with a social psychological perspective based on attitudes and social influence. These analyses are based on a theoretical framework developed by Fishbein and Ajzen (1975), which has been found useful in a variety of behavioral choice contexts, including political behavior (Fishbein, Ajzen & Hinkle, 1980), road safety (Budd & Spencer, 1986), and health behaviors (Kristiansen & Eiser, 1986). Fishbein and Ajzen posit that there are two major factors that influence individuals' intentions to behave in a certain manner--their attitudes toward the behavior of interest (in this case, enlistment), and their perceptions of the attitudes of other individuals who are important to them. Since the ACOMS survey was constructed to reflect the variables in their

[1] ACOMS was developed under the sponsorship of the Deputy chief of Staff for Personnel (DCSPER), with the cooperation of the U.S. Army Recruiting Command (USAREC). It was conducted by Westat, under the guidance of the Army Research Institute and a Special Advisory Group (SAG) composed of representatives from the various Army components.

theory of reasoned action, the theory's utility within the military recruiting context can now be tested. The ACOMS data set also provides the unique opportunity to link parental reports to young men's reports, and to examine the joint effects of their combined data on enlistment propensity and behavior.

Further, this analysis examines the relationship between enlistment propensity and actual enlistment behavior, building on analyses reported earlier by RAND (Orvis, Gahart, and Ludwig (1992). Finally, the study uses the analytic techniques of structural equation modeling, which are considerably more powerful than the descriptive techniques employed in many studies. These techniques optimize both the measurement and structural aspects of the modeling effort. In contrast to techniques often employed to test theoretical models, structural equation modeling allows for the simultaneous estimation of a large number of hypothesized relationships among variables included in the model.

ACOMS data were collected between October 1986 and January 1988. Given the passage of time, questions regarding the utility of these analyses to today's recruiting world cannot be ignored. Clearly, many changes have occurred in the intervening years, notably the downsizing of the military forces, the end of the cold war, and the deployment of the military in several intense but localized wars. Indeed, many of these changes might be offered as at least partial explanation for the recent decline in enlistment propensity among youth. This report, however, is based on the premise that while the *levels* of enlistment propensity have changed, the *correlates* of propensity can be expected to show greater stability. Therefore, the relationships among the various factors affecting young men's interest in the military and their eventual application to serve in the Armed Forces are expected to remain as true today as they were when the data were collected.

The results of this study are relevant to various parties interested in Army enlistment. In line with the original goals of the ACOMS project, this analysis contributes to the development of behavioral and economic models of enlistment decisionmaking developed by and under the guidance of researchers at the Army Research Institute. These results provide further insight into the importance of parents and friends in influencing the young men's entry into the military, and into the different roles they play in this process. The study also provides guidance to Army research methodologists, pointing to content domains and specific items that should be included in survey instruments. There are implications, as well, for many of the marketing and advertising concerns of the U.S. Army Recruiting Command. The results imply, for example, the value of increased recruiter emphasis on the social desirability of the military as a career choice for young people. Finally, study findings on the important roles of parents and friends in enlistment decisions corroborate the intuitions of the Army's best recruiters, and emphasize the need for recruiter attention on the parents of their potential recruits.

Overview of Methodological Approach

The study uses ACOMS survey responses obtained from telephone interviews of a sample of young men between the ages of 16 and 20, and their parents, collected in 1986 through 1988. This analytic sample was taken from a larger set of ACOMS interviews of young men and women between the ages of 16 and 24. The young men and women interviewed by ACOMS had not served previously in the military and had not yet graduated from college. The sample was located using random digit dialing (RDD) methodology and interviewed using computer assisted telephone interviewing (CATI) methodology. The youth and their parents were interviewed on various issues related to the enlistment decision process, advertising, and perceptions about various components of the Army. Readers who are interested in complete documentation about the ACOMS design and instrumentation are referred to

The Army Communications Objectives Measurement System (ACOMS): Survey Design (Nieva & Elig, 1988).

The analytic sample for this report was constructed by identifying youth-parent pairs from the ACOMS data set, and matching the youth to military application data over the years 1986 to 1994 obtained from the Defense Manpower Data Center. Survey items were selected in accordance with a conceptual model of enlistment intention and behavior, based on the Fishbein and Ajzen theory of reasoned action. The Fishbein and Ajzen theory suggests a chain of effects that starts with individual attitudes, which affect intentions to behave in a manner consistent with the attitudes, which in turn affect actual behaviors. Chapter 2 of this report provides a description of the conceptual model of enlistment intentions and behavior based on the theory of reasoned action.

The conceptual model was operationalized and tested iteratively. Descriptive statistics were generated for the youth and parent data. Composite variables were developed using a variety of analytic techniques. All analyses started with the examination of simple frequency distributions and inter-item correlations. Factor analyses were conducted where appropriate (e.g., for composite measures of youth attitude toward enlisting in the Army), and these results were verified in later steps using LISREL® measurement models. For some variables, multi-item indices were constructed logically, rather than statistically. Chapter 3 describes these procedures, and Appendix B provides detailed information about the variables used in specifying and testing the models.

Hypothesized relationships among variables in the conceptual model were specified and tested iteratively using a combination of SAS regression procedures and structural equation modeling using LISREL® software. An overview of the LISREL® modeling methodology is presented in Chapter 4.

All models were developed with the aim of explaining youth enlistment intention and actual behaviors. Within that general framework, several specific models were developed. Two models were developed using only the data obtained from the youth, the first focusing more broadly on military enlistment intention, and the second focusing on Army enlistment intention. Two other models were developed using the linked data of youth and their parents. These linked models also focused on military enlistment and Army enlistment.

2. Conceptual Model

The Fishbein and Ajzen (1975) theory of reasoned action serves as the conceptual template for this analytic effort. In brief, the theory posits that a person's behaviors are determined by the person's intentions to behave in a certain manner. In turn, a person's behavioral intentions are a function of two general antecedents: attitudes toward the relevant behavior, and subjective norms about the behaviors. Fishbein and Ajzen define attitudes as a multilinear function of a person's evaluation of the salience of a behavior's attribute and the likelihood of affecting the individual. Subjective norms are similarly defined as the perceived opinions of others multilinearly combined with the salience of those opinions. Figure 1 represents the simplified core of the theory of reasoned action.

This general theory has been applied to a wide variety of behavioral choice situations. In ACOMS the theory of reasoned action was used as the conceptual underpinning of a research program on enlistment decisionmaking and the factors (especially advertising) that affect enlistment decisions. The theory guided the development of the ACOMS questionnaires and various analyses conducted on the data (Nieva and Elig, 1988).

The theory of reasoned action also served as the basis for this effort to model youth enlistment intentions and behavior. In addition to the core relationships suggested by the theory of reasoned action, this modeling effort was elaborated to include other youth variables considered important by the recruiting community (e.g., demographics and alternative career paths). Also, the conceptual model was further extended to include variables obtained directly from the parents of the youth respondents. The application of the Fishbein and Ajzen theory to research on enlistment intentions and behaviors is presented below.

The Youth Model of Enlistment Decisionmaking

Figure 2 illustrates the core of the conceptual model of youth enlistment decisionmaking. The figure shows that youth attitudes toward enlistment and subjective norms about enlistment affect youth enlistment intentions, which in turn affect enlistment behaviors.

Following the logic of the theory of reasoned action, attitudes toward the Army are operationalized as the product of the individual's beliefs or perceptions about various Army attributes emphasized in Army communications (e.g., offering physical challenge, developing your potential) and the youth's evaluation of the importance of these attributes. Attitudes are most positive when the Army is seen as possessing the attributes that the young men consider as important to their future. These attitudes about the Army shape the youth's enlistment intentions, or enlistment propensity. Enlistment propensity then influences the behavior of applying to join the military. The positive relationship between enlistment propensity and actual enlistment behaviors has been demonstrated previously by Orvis, Gahart, and Ludwig (1992), using data from the Youth Attitude Tracking Study.

In addition to the link between attitudes and intentions, Fishbein and Ajzen posit the importance of subjective norms in determining an individual's intentions and actions. Previous research indicates that, with regard to enlistment interest, the most relevant sources of normative influence are young men's parents and peers. Our conceptual model includes two measures of subjective norms: The young men's perceptions about peer and parental approval of the possibility of their joining the Army,

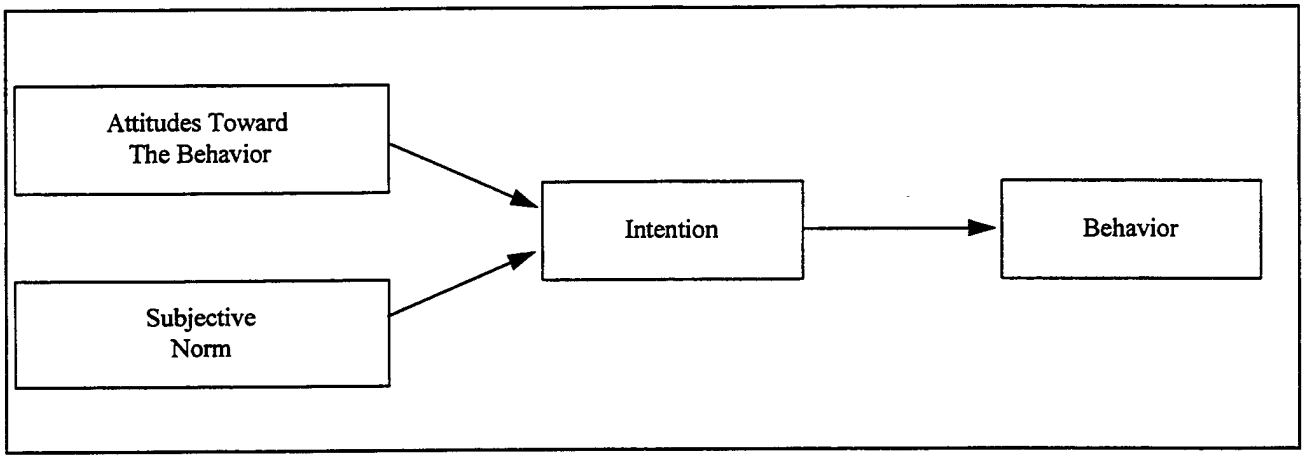

Figure 1. Fishbein and Ajzen's theory of reasoned action.

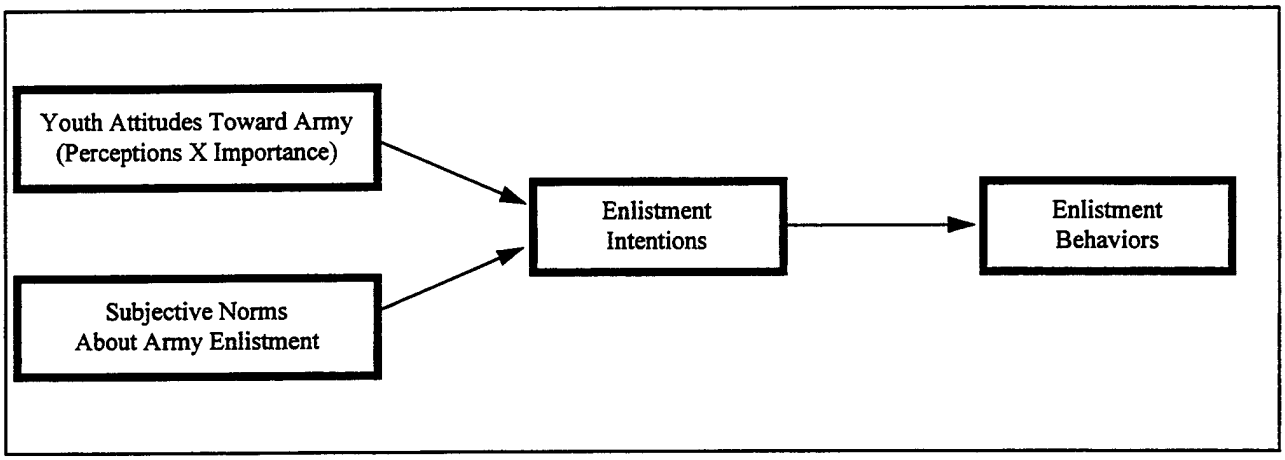

Figure 2. Youth model of enlistment decisionmaking.

and their perception of the enlistment of similar others. That is, if young men see their friends and parents as supportive of their enlistment, their enlistment intentions will be more positive. Similarly, the extent to which they perceive that other young people similar to themselves are joining the Army is hypothesized to have the same positive influence on their enlistment intentions.

The Fishbein and Ajzen theory suggests that other variables, such as the person's demographic characteristics, do not add to the predictive power of their core variables: attitudes and subjective norms. The theory states that such variables, which play a prominent role in other choice models, work through their influence on attitudes. However, because past research on enlistment propensity has focused heavily on the relationship between demographic variables such as race and "quality," we have expanded our model beyond the key concepts suggested by Fishbein and Ajzen to include other sets of variables: youth demographics, knowledge about army benefits, college and work intentions, and intermediate behaviors toward alternative options. Figure 3 shows the expanded youth model.

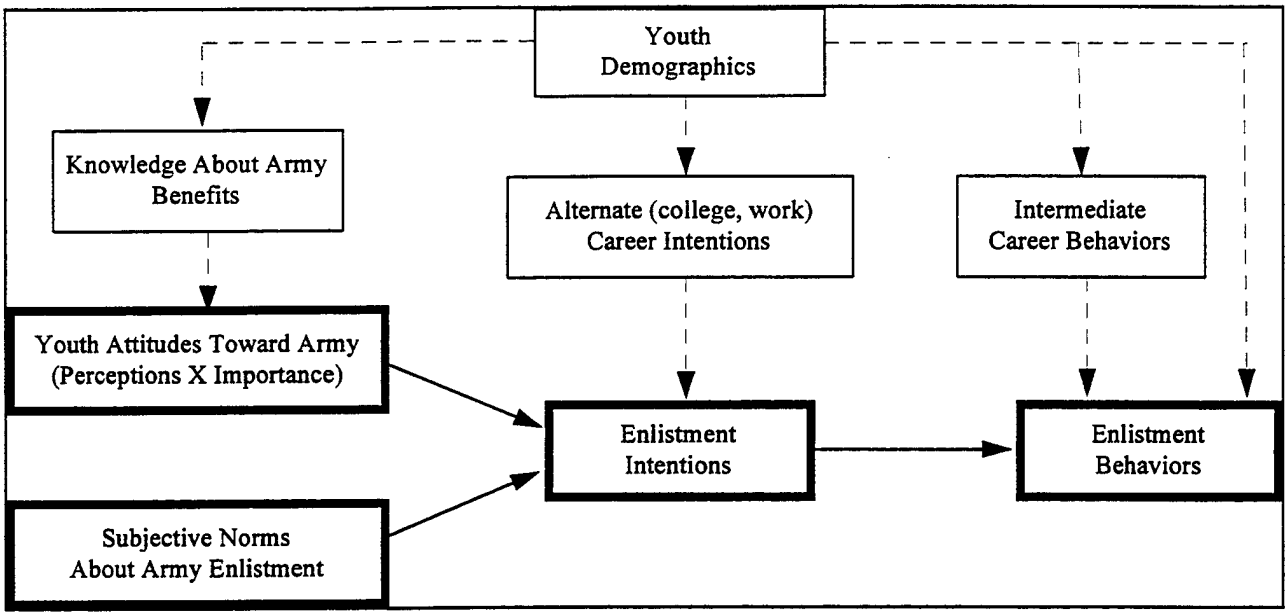

Figure 3. Expanded youth model of enlistment decisionmaking.

Because there is less theoretical guidance regarding the expected relationships of these variables, we indicate their preliminary placement in the conceptual model by broken lines.

Our expanded conceptual model suggests that demographic variables (life stage, exposure to the military, quality, and socio-economic status) play a significant role in the enlistment process. Life stage reflects young men's status in terms of their educational achievement and employment status. Exposure to the military via friends and family represents the opportunity that the young men have had to become familiar with the military as an institution and as a way of life. In general, we expect that young men who have been exposed to military life by having friends and family in the service would have more positive attitudes toward the Army. "Quality" in this context represents the probability that the individual will score in the top half of those taking the Armed Forces Qualifying Test (AFQT) when applying for the military. Research has generally shown a negative correlation between quality indicators and enlistment propensity. Socio-economic status is also expected to be negatively related to enlistment interest.

Our conceptual model suggests that knowledge about Army benefits influences youth attitudes toward the Army. Increasing knowledge about what the Army can offer in terms of benefits is one of the primary objectives of Army advertising. Our model also includes consideration of the alternative career paths that are available to young people. Military enlistment represents an option that is considered along with enrolling in college and taking a full time civilian job. Therefore, alternate career intentions and intermediate career behaviors are seen as influencing enlistment intentions and behaviors. Alternate career intentions represent the youth's stated plans to go to college or to take a full time job. Intermediate career behaviors represent actions the young men have made in moving toward enrolling in college or taking a full-time job. Youth plans and actions taken toward college enrollment and full-time civilian employment would be expected to be negatively related to enlistment intentions and behaviors. However, the various paths that connect these variables are not obvious and will be explored in the model building effort.

The Youth and Parental Model of Enlistment Decisionmaking

In ACOMS, the framework provided by the theory of reasoned action was extended to include measures of parental influence obtained directly from parents of the ACOMS youth respondents. In the recruiting community, parents have always been considered as important sources of influence on the young person's decision to join the military. Therefore our conceptual model was expanded to include parental variables to complement youth views about their parents' perspectives. Figure 4 shows the youth and parent model of enlistment decisionmaking, which encompasses the core relationships among the youth variables as hypothesized by the Fishbein and Ajzen theory, and the additional variables obtained from their parents.

Our youth and parent model shows parents are expected to affect the youth's subjective norms about enlistment. Parents communicate their attitudes toward their child's enlisting in the Army through their interactions. These communications, in turn, are expected to affect the youth's perceptions about their parents' endorsement (or nonendorsement) of their enlistment.

Our model suggests that parental influence on youth enlistment develops from a logical sequence that parallels the youth sequence, starting from attitudes through intentions to behaviors. Like youth attitudes, the parents' attitudes towards their sons' enlistment in the Army are the product of the parents' ratings of the importance of various attributes emphasized by the Army, and their perceptions that the Army does in fact offer these attributes to their sons. These attitudes are hypothesized as affecting parental preferences for their sons' future (i.e., whether they prefer their sons to attend college, work at a full time job, or join the Armed Forces), which are the parental analogue to youth intentions to enlist, to go to college, or to work in a civilian job. In turn, these parental preferences influence their actual behaviors with regard to their son's enlistment, that is, parental communications with youth regarding enlistment. Finally, the model shows that parental communications are expected to influence youth subjective norms about enlistment.

Building on the youth model of enlistment decisionmaking, our youth and parent model goes beyond the chain of factors contained in the Fishbein and Ajzen theory, to include parental demographics (in particular, service in the military, income and gender). These parental characteristics are expected to affect parental attitudes toward the youth's enlistment. We expect that parents who have served in the military would have more positive views toward the possibility of their child's joining the service. In addition, the model suggests that parents with different income levels, as well as fathers versus mothers, may influence the enlistment process in different ways.

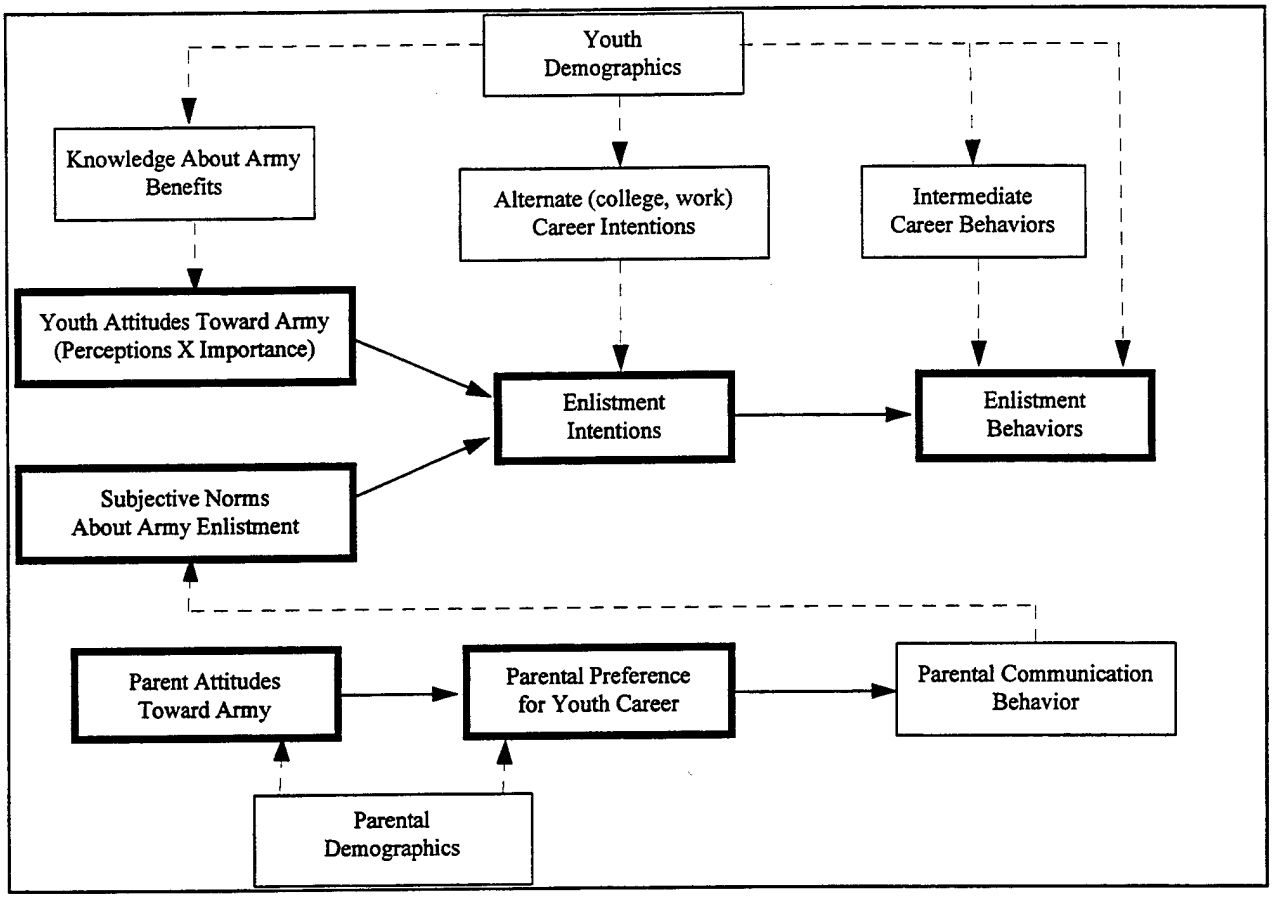

Figure 4. Youth and parental model of enlistment decisionmaking.

3. Sample and Variable Description

The purpose of this chapter is two-fold. First, it describes the parent and youth samples. Second, it describes the variables used to operationalize the model constructs.

Youth and Parent Samples

The youth analytic sample consisted of 16 to 20 year old males with no prior military service, who either graduated or were currently enrolled in high school or college. The parallel parent sample consisted of fathers for a random half of the youth, and mothers for the remaining youth. The sample was further restricted to male youth who provided Social Security Numbers (SSNs) and were administered questions on the attributes of the Active Army[1]. A total of 2,371 youth-parent pairs were included in the sample.

The youth data were weighted to represent the national population of youth with the characteristics noted above. The weights compensate for unequal chances of selection in the sample frame and for nonresponse. The parental data received the same weight as applied to the youth counterpart. Thus, the parent sample represents the population of parents with children having those characteristics of the youth sample. All data presented in this chapter are weighted.

Youth and parent demographics are profiled below to provide a fuller characterization of the linked youth-parent analytic sample. Note, however, that demographics were included in the initial enlistment decisionmaking model.

Youth Demographics

Table 1 profiles the demographic characteristics of the youth included in the analysis. As shown, 74.7% of youth are White non-Hispanic, and 14.5% are Black non-Hispanic. One-tenth (9%) of the youth were Hispanic. The majority of youth had completed either the 10th (19.9%), 11th (26.8%), or 12th (32.4%) grade. Of those completing the 12th grade, most (99.5%) received a regular high school diploma. Finally, three-fifths (61.9%) of the youth said they were employed, either full-time or part-time.

Exploratory Analyses and Variable Construction

Prior to testing the full model, preliminary investigation of the data occurred. This included an examination of item frequencies and intercorrelations. For youth and parental attitudes, exploratory factor analyses to assess the dimensionality of the attitude structures were performed. These analyses help operationalize variables in the model and take a preliminary look at the expected relationships among the variables.

To describe the model variables, the following information is given: operational definitions, response ranges, constituent survey items (for composites), and frequency distributions. For each

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[1] Generally, youth were asked their perceptions of active Army opportunities as well as for one or two additional referents. However, approximately one-third of youth in their first or second year of attending a 4-year college were instead asked for their perceptions of the Reserve Officers' Training Corps (ROTC), instead of the active Army.

Table 1
Demographic Characteristics of Youth in the Analytic Sample

Demographic	Category	Percentage of Population
Race/Ethnicity:	White, non-Hispanic	74.7
	Black, non-Hispanic	14.5
	Hispanic	9.0
	Other	1.9
Age:	16	21.2
	17	24.0
	18	23.6
	19	16.1
	20	15.1
Marital Status:	Never Married	96.7
	Married	3.2
	No Longer Married	0.2
Education:	8th Grade	1.7
	9th Grade	7.2
	10th Grade	19.9
	11th Grade	26.8
	12th Grade	32.4
	1-3 Years College	6.9
	1 Year Junior/Community College	3.3
	2 Years Junior/Community College	0.5
	Vocational/Business School	1.3
Type of High School Degree:[1]	Regular HS Diploma	99.5
	GED	0.2
	Other Certificate	0.2
	None of Above	0.1
Employment Status:	Employed	61.9
Exposure to People in the Army	None	24.2
	Friends in other military Service	30.1
	Friends only in Army	32.7
	Family/Friends and family in Army	13.0

[1] Among those completing at least the 12th grade.

Unweighted N=2,371 youth.

Table 2
Demographic Characteristics of Parents in the Analytic Sample

Demographic	Category	Percentage of Population
Gender:	Male	47.1
	Female	52.9
Race/Ethnicity:	White, non-Hispanic	76.2
	Black, non-Hispanic	13.5
	Hispanic	8.1
	Other	2.2
Marital Status:	Never Married	2.7
	Married	85.0
	No Longer Married	12.3
Education:	Less than 12th Grade	18.2
	12th Grade	39.3
	1-3 Years College	11.4
	4 Years College	10.7
	1-2 Years Graduate School	6.2
	3 or More Years Graduate School	3.1
	1 Year Junior/Community College	1.9
	2 Years Junior/Community College	4.4
	Vocational/Business School	4.9
Type of High School Degree:[1]	Regular HS Diploma	89.1
	GED	8.6
	ABE	0.2
	Other Certificate	0.7
	None of Above	1.4
Employment Status:	Full-Time	70.1
	Part-Time	11.7
	Not Employed	18.3
Income:	Less than $5,000	3.7
	$5,001 - $10,000	6.0
	$10,001 - $20,000	17.2
	$20,001 - $30,000	22.8
	$30,001 - $40,000	19.6
	$40,001 - $50,000	12.4
	More than $50,000	18.4
Military Service:	Ever in Military	26.5
	Still in Military[2]	4.6
Education of Parent/Guardian with Whom Youth Lives:	No high school degree	11.2
	High school graduate	40.5
	One year college	3.4
	Two years college	10.5
	Three years college	2.0
	College graduate	23.5
	Postgraduate	8.9

[1] Among those completing at least the 12th grade.

[2] Among those who had ever been in the military.

Unweighted N=2,371 parents.

variable, Appendix B provides: SAS code showing how to construct and/or recode all analytic variables; response codes; and unweighted frequencies.

Youth Attitudes Toward the Army

The core of the enlistment decisionmaking model begins with youth attitudes toward the Army. This variable assessed the perceived opportunistic and developmental aspects of the Army. Specifically, youth were asked whether the Army offered a series of attributes (i.e., perceptions of attributes), as well as the importance of these attributes (see Table 3). These attributes represent advertising copy points emphasized by the Army during the ACOMS survey.

Consistent with the Fishbein and Azjen model, the importance and perceptions ratings for each attribute were multiplied to produce an attitude score. Hence, favorable attitude score occurred with both high importance and high perceptions ratings. Conversely, an unfavorable score occurred with low ratings for both importance and perceptions.

Importance of Attributes. Youth rated the importance of 11 attributes on a 5-point scale ranging from "Not at All Important" to "Very Important." Nine of the 11 attributes examined were rated as important by four-fifths or more youth, with five attributes rated as important by over 90% of the youth. The lowest-rated attribute, "Working with high-tech equipment," was still considered important by 69.5% of the youth (see Table 3).

Importance ratings were generated from the following item:

> In thinking about your plans for the next year, please tell me how important it is that you have opportunities for the following things [i.e., each attribute].
>
> Use a scale of 1 to 5 where a "1" means it is not at all important and "5" means it is very important.

Perceptions of Attributes. As with importance ratings, youth indicated the extent they agreed that each of the 11 attributes were offered by the Army. These responses were made on a 5-point scale ranging from "Disagree Completely" to "Agree Completely." Overall, youth agreed that the Army offered these attributes (see Table 3). Ten attributes received agreement ratings from two-thirds or more of the youth. The lowest-rated attribute, "opportunity to develop leadership skills" was still related as being offered by the Army for nearly 60% of the youth.

Perception ratings were generated from the following item:

> I am going to read you a list of statements describing different things the Army might offer. Please tell me how much you disagree or agree that the Army offers each item on the list [i.e., each attribute].
>
> A "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

Attitude Scores for Youth. As noted, attitude scores were formed by multiplying the importance and "centered" perception ratings (i.e., recoded to range from -2 to +2) for each Army attribute. For example, the importance of "a physically challenging environment" rating was multiplied by the centered perception rating for that attribute to form an attitude score for "a physically challenging environment." Thus, each attitude score could range from -10 to +10.

As measured, youth attitudes deviate from a strict interpretation from the Fishbein and Azjen model, which specifies that the measured attitudes should focus on the *behavior* being predicted. That is, for predicting enlistment behaviors, the attitudinal referent should be enlistment behaviors, rather than Army attributes, per se. However, the question focus on the Army was designed in view of the original ACOMS purpose to study Army advertising effectiveness. Within this context, it was important to structure inquiries in terms of respondent's perceptions about the Army, focusing on the attributes that served as the copy points of the Army's advertising campaigns.

Table 3 presents the percentage of youth who rated each attribute as important, the percentage who agreed that the Army offered each attribute, and the mean attitude score for each attribute. As indicated, youth had high regards for the importance of these attributes, and generally agreed that they were offered by the Army. In fact, very few youth held negative (attitude scores below 0) or neutral (attitude scores of 0) attitudes. Slightly over one-fifth (21.8%) had attitude scores of 1, 2, or 3, while over one-third (35.3%) scored between 4 and 6. The remaining one-third (34.9%) scored 7 or greater on the attitude scale.

Enlistment Intentions

Youth attitudes toward the Army were hypothesized to causally influence enlistment intentions. Two composite variables assessed youth intentions to enlist in any military service, or the Army specifically. The appropriate intentions measure varied with the corresponding model being tested (e.g., Army vs. military).

The measure of enlistment intentions used in this analysis is often referred to as "Enlistment Propensity" in the recruiting research literature. Enlistment propensity measures have been tracked over the past two decades as indicators of the youth market potential for military recruitment. This measure asks about the likelihood of doing a variety of things in the future, thereby combining respondent interest in the Army with a subjective probability that the Army will accept the person. Future research might distinguish between interests on the part of the individual and the person's subjective probability of acceptance by the Service.

Enlistment propensity is most often measured on a two-point scale -- positive or negative. The measures used here are ordinal measures of propensity/intention ranging from strong negative enlistment intentions to strong positive enlistment intentions.

Army Intentions. Army intentions was measured on a 4-point scale: (1) Positive unaided enlistment intention; (2) positive aided enlistment intention; (3) negative "probably not" youth; and (4) negative "definitely not" youth. This variable was constructed using the following items:

> Now let's talk about your plans for the next few years. What do you think you might be doing? (JOINING THE MILITARY/SERVICE)

> Now I'm going to ask you about several things young {men/women} your age might do in the next few years. Please tell me whether you will definitely, probably, probably not, or definitely not be doing each of the following things. How likely is it that you will be serving in the Army?

The first item above is an open-ended question, allowing any number of responses. Youth mentioning the military (represented by the capitalized text in parentheses after the question text) who, when asked for a service, said the "Army," were coded as displaying positive *unaided* propensity. In contrast, youth giving a positive response to the second item were coded as displaying positive *aided* propensity.

Military Intentions. Military intentions measured intent to join any military Service and was assessed on a 5-point ordinal scale with the following response options: (a) definitely not; (b) probably not; (c) positive aided propensity; (d) positive unaided propensity; and (e) most likely. In addition to the two variables used to construct Army intentions, military intentions used the following item:

> We've talked about several things you might be doing in the next few years. Taking everything into consideration, what are you most likely to be doing in the next year?

Youth mentioning serving in the military were assigned to the most positive category. For both Army and military enlistment intentions, a person's classification on each scale is established hierarchically from positive to negative. That is, youth were classified top-down in the first response category for which they fit. In the Army measure, youth negative on Army aided propensity (the second item above), but positive on military unaided propensity, were placed in the second most positive category.

Table 4 presents frequencies on the Army and military intentions measures. Only 7.4% of youth expressed positive unaided propensity to enlist in the Army. For military intentions, 5.5% of youth fell into the "Most Positive" category, while another 10.1% were classified as having positive unaided propensity.

Enlistment Behaviors

Enlistment behaviors represented the end product in the enlistment decisionmaking model. Enlistment behaviors identify youth who had taken any of various possible steps toward enlisting in the military. This information was available from Military Entrance Processing Station (MEPS) records from 1986 to 1994 by the Defense Manpower Data Center.

This variable represents any action (e.g., test-taking, physical examinations, application, and entrance) taken toward enlisting in the military subsequent to being interviewed for ACOMS. This variable did not differentiate what action(s) had been taken, or for which military Service. However, enlistment behaviors provide an indication of interest and pursuit of a military career, beyond intentions. This variable had a value of 1 if there was information in the MEPCOM files for that youth. One-fifth (21.4%) of the youth had taken some action toward enlistment between the date of the ACOMS interview and the end of 1994.

Table 3
Youth Attitudes Toward the Army

Attribute	Importance[1]	Perception[2]	Mean Attitude Score
Becoming more mature and responsible	91.4	80.8	5.6
Developing leadership skills	81.8	59.6	4.7
Developing potential	92.4	76.3	4.8
Developing self-confidence	89.5	73.2	5.0
Earning money for education	77.9	76.2	5.3
Experiences to be proud of	92.9	74.4	5.0
Having a mental challenge	84.2	77.1	4.1
Having a physical challenge	80.7	69.8	5.5
Highly trained coworkers	81.7	84.5	5.0
Working with high-tech equipment	69.5	66.8	5.1

[1] Includes the two most positive response categories.

[2] Includes the response categories "Agree Somewhat" and "Agree Completely."

Unweighted N=2,371 youth.

Table 4
Military and Army Intention Among Youth

Career Path	Intention	Percentage of Population
General Military	Definitely not	28.4
	Probably not	40.2
	Positive aided propensity	15.8
	Positive unaided propensity	10.1
	Most likely	5.5
Army	Definitely not	31.9
	Probably not	42.2
	Positive aided propensity	18.6
	Positive unaided propensity	7.4

Unweighted N=2,371 youth.

Table 5
Enlistment Behaviors Among Youth

Behavior	Action	Percentage of Population
Military Application[1]	Yes	21.4
MEPS Visit	No	78.6

[1] Obtained from Military Entrance Processing Command (MEPCOM) Edit Files, 1986-1994.

College and Work Intentions

College and work intentions variables, crafted to parallel Army intentions, measures the youth's consideration of alternative career paths. Specifically, these variables assessed youth intent to enter college or obtain full-time employment. Both measures represent an expansion of the core enlistment decisionmaking model. Furthermore, as with Army intentions, college and work intentions are measured on a 4-point scale: (1) positive unaided propensity; (2) positive aided propensity; (3) negative "probably not" youth, and (4) negative "definitely not" youth.

Several features of college and work intentions should be highlighted. First, no distinction is made between the "definitely" and "probably" categories in the aided propensity questions. These responses are collapsed into the second most positive category. Second, an individual was not placed in the most positive category if their aided intention was negative. Finally, for college intentions, youth are excluded from the most likely category if they responded negatively to the aided question concerning college plans. (In this circumstance, it was felt that the schooling referred to in the unaided question was not college.)

The variable constructed to measure college intentions used the following items:

> Now let's talk about your plans for the next few years. What do you think you might be doing? (GOING TO SCHOOL)
>
> How likely is it that you will be going to college?

The variable constructed to measure work intentions used the following items:

> Now let's talk about your plans for the next few years. What do you think you might be doing? (WORKING)
>
> How likely is it that you will be working in a civilian job?

Table 6 shows the population distributions on the work and college intentions measures. As expected, youth exhibited much higher levels of college and work propensity as compared to general military or Army propensity. Two-thirds (66.9%) of youth expressed positive unaided propensity to attend college, while 59.9% expressed positive unaided propensity to work full-time.

Intermediate Career Behaviors Among Youth

Another set of variables cursory to the core of the conceptual model dealt with youth behavioral progress along three potential career paths: attending college[2], working full-time, and enlisting in the Army. These intermediate career behaviors were hypothesized to directly influence enlistment behaviors. Each career behaviors variable had five response alternatives. For college and work, responses included: done nothing; talked about applying to college or a job; taken an intermediate action (visiting a college or business); filled out an application; or currently attending college or employed in a full-time job. For Army enlistment, responses included: done nothing; talked about enlisting in the Army; either visited a recruiter or taken the Armed Forces Vocational Aptitude Battery (ASVAB); or both visited a recruiter and taken the ASVAB.

[2] While attending college is technically not a career, it requires a long-term commitment, so is defined as a career path.

Table 6
College and Work Intention Among Youth

Career Intention	Intentions	Percentage of Population
College	Definitely not	8.4
	Probably not	15.7
	Positive aided propensity	9.0
	Positive unaided propensity	66.9
Work	Definitely not	2.9
	Probably not	9.0
	Positive aided propensity	28.1
	Positive unaided propensity	59.9

The variable describing college-related behaviors was constructed using the following items:

> What kind of school or training program {are you/were you last} enrolled in?
>
> In the past six months, have you talked to anyone about going to college? (Yes/No)
>
> In the past six months, have you taken any college admissions tests (i.e., the PSAT, SAT, or ACT)? (Yes/No)
>
> In the past six months, have you submitted a college application? (Yes/No)

With these items, type of school served as a gatekeeper. Phrasing for this question depended on whether the youth had earlier indicated he was currently in school or a training program. If a youth was currently in a 2-year or 4-year college, he was assumed to have taken the steps represented by the remaining items. Otherwise, he was asked the other questions.

The variable describing civilian employment-related behaviors was constructed with the following items:

> Are you currently employed either full-time or part-time? (Yes/No)
>
> How many hours per week {do/did} you usually work at your {main/last} job?
>
> In the past six months, have you spoken with anyone about getting a full-time civilian job? (Yes/No)
>
> In the past six months, have you visited any prospective employers or employment agencies? (Yes/No)
>
> In the past six months, have you applied for a job? (Yes/No)

With these items, current employment status and hours worked at a current job served as gatekeepers. Thus, if a youth was employed and working 35 hours per week or more, he was assumed to have already undertaken the steps represented by the remaining items. Otherwise, he was asked the remaining questions.

The variable describing Army enlistment-related behaviors was constructed using the following items:

> In the past six months, have you talked with anyone about possibly joining the Army? (Yes/No)
>
> With whom have you talked? (A RECRUITER)
>
> Was the recruiter you spoke with an Army recruiter? (Yes/No)
>
> In the past six months, have you visited an Army recruiting station? (Yes/No)
>
> In the past six months, have you taken a written test used for the Army such as the Armed Services Vocational Aptitude Battery? (Yes/No)

Table 7 presents the population responses to each of the career behaviors measures. As shown, more youths talked about applying to college (24.3%) than about getting a job (5.4%) or enlisting in the Army (8.6%). Conversely, fewer youths reported taking a definite action toward college (11.6%) than toward work (23.0%) or enlisting in the Army (23.6% either took the ASVAB or spoke with a recruiter).

Youth Knowledge about Army Benefits

As with career intentions and career behaviors, youth knowledge about benefits was assessed and added to the core enlistment decisionmaking model. This variable was hypothesized to directly influence youth attitudes toward the Army. Knowledge of Army benefits ranged from 0 to 6, corresponding to the number of correct responses to the following items:

> Is it possible to earn money for college by enlisting in the Army? (Yes/No)
>
> How much do you think can be earned through Army education benefits?
>
> Do you think Army education benefits are more, less or about the same as the Navy, Air Force, or Marines offer?
>
> Please tell me whether or not the Army offers the GI Bill.
>
> What is the minimum number of years that a new recruit has to serve on active duty in the Army?
>
> Is it possible to sign up for the Army and actually start serving one year later? (Yes/No)

Table 7
Intermediate Career Behaviors by Youth

Career Path	Intention	Percentage of Population
College	Done nothing	29.1
	Talked about applying to college	24.3
	Took some action	15.4
	Took definite action	11.6
	Currently attending college	19.6
Work	Done nothing	42.8
	Talked about getting a full-time job	5.4
	Took some action	2.2
	Took definite action	23.0
	Currently working in a full-time job	26.6
Army	Done nothing	59.6
	Talked about enlisting in the Army	8.6
	Either took the ASVAB or spoke with an Army recruiter	23.6
	Took the ASVAB and spoke with an Army recruiter	8.2

Unweighted N=2,371 youth.

Table 8 presents item and composite-level information of a knowledge of Army benefits. As shown, almost all youths agreed it was possible to earn money for college in the Army, and that the Army offered the GI Bill (98.2% and 97.1% , respectively). Similarly, 93.9% agreed it was possible to enter the Delayed Entry Program (DEP). However, less than one-half knew the minimum term of enlistment was 2 years, or that the Army would pay for an entire college education (44.5% and 45.0% , respectively). Less than one-fifth (18.7%) knew that Army benefits were greater than those offered by the other Services. Finally, youth did not appear to know the dollar amount of Army benefits they could receive, as revealed by the even distribution across the six response categories.

The overall lack of knowledge about Army benefits is clear when examining the number of questions correctly answered. One-half (50.4%) of youth did not correctly answer any of the six benefits questions. Another 16% correctly answered one-half (three) of the questions, with an additional 17% correctly answering four of the six questions.

Subjective Norms

A final hypothesized influence in the youth portion of the enlistment decisionmaking model was subjective norms. As a key component of the core conceptual model, subjective norms pertain to a youth's perception of what different individuals (e.g., parents) thought about enlisting in the Army, or whether the youth knows people with military experience. As such, these variables provide indicators of potential normative influences toward youth enlistment. Subjective norms were hypothesized to directly influence enlistment intentions.

Table 8
Knowledge of Army Offers Among Youth

Offer[1]		Percentage of Population[2]
Possible to earn money for college by enlisting in the Army		98.2
Amount of Army benefits [3, 4]		
	Under $5,000	14.8
	$5,000-$9,999	18.1
	$10,000-$14,999	18.6
	$15,000-$19,999	15.3
	$20,000-$24,999	17.0
	$25,000 or more	16.2
Army benefits in comparison to Navy, Air Force, and Marine Corps offers [3,4]		
	More	18.7
	Less	9.8
	About the same	71.5
Army offers GI Bill		97.1
Navy offers GI Bill		45.6
Air Force offers GI Bill		61.6
Marine Corps offers GI Bill		69.4
Minimum number of years for active Army enlistment[4]		
	One	2.1
	Two	44.5
	Three	15.4
	Four	33.1
	Five or more	4.8
Can join Army Delayed Entry Program (DEP) and start active service up to 1 year later		93.9
Army would pay for entire college education: Yes		45.0
Total Number Correct		
	None	50.4
	One	1.4
	Two	5.0
	Three	16.3
	Four	16.5
	Five	8.2
	Six	2.2

[1]Asked of a random one-half of all youth. Estimates are based on interviews with approximately 1,157 youth.

[2]"Don't Know" and "Refused" included as valid, but incorrect, responses.

[3]Asked of youth who said it was possible to earn money for college by enlisting in the Army.

[4]Correct answer(s) underlined.

Similar People Enlisting. This variable assessed whether or not youth felt others like themselves are likely to enlist in the Army. This variable comes from the single item:

> Do you think that very young men with backgrounds and plans for the future like yours are joining the Army? (Yes/No)

Missing responses were recoded as "unknown." Therefore, the variable had three possible response alternatives: no, unknown, and yes.

Peer/Parent Attitude to Army Enlistment. Five additional variables represented different aspects of subjective norms. Specifically, these variables measured attitudes of parents and friends toward the youth enlisting in the Army. The variables are based on the following question:

> For each of the following people [father, mother, friends with Army experience, friends with other military experience, friends with no military experience], please tell me how you think they would feel about your enlisting in the Army. Use a scale of 1 to 5 where a 1 means they would think it is a very bad idea, and 5 means they would think your enlisting would be a very good idea.

The responses were recoded to range from -2 to +2, representing positive attitudes with positive values, and negative attitudes with negative values. "Not applicable" responses were recoded to 0.

As shown in Table 9, youth felt those most open to Army enlistment would be friends with Army experience (60.8%) and friends with experience in one of the other military Services (54.2%). Over two-fifths (44.6%) of youth thought their fathers would regard enlisting in the Army as a good idea, while under one-quarter (23.3%) thought their fathers would think it a bad idea. In comparison, over one-quarter (28.1%) said their mothers would think the youth enlisting would be a good idea, whereas another two-fifths (39.6%) felt their mothers would think it a bad idea. Youth felt friends without military experience would be least favorable toward enlisting. Only 13.3% of the youth felt that nonmilitary friends would think it a good idea for the youth to enlist in the Army, while over one-half (52.4%) said friends with no military experience would think it a bad idea.

Parental Attitudes Toward the Army

Turning to the parent portion of the model, parental attitudes toward the Army pertains to parents' views concerning those same Army attributes on which their sons were queried. As with the youth, parents were asked whether or not the Army offered these attributes (i.e., their perception), as well as the importance of these attributes for their sons.

Importance of Attributes to Parents. Parents rated the attribute importance *for their sons*, on a 5-point scale ranging from "Not at All Important" to "Very Important." Overall, parents rated most opportunities as important. Eight of the attributes were rated as important by three-quarters or more of the parents, led by "Developing potential" (93.6%). The lowest-rated attribute, "highly trained coworkers," was rated as important by almost two-thirds (65.2%) of the parents (see Table 10).

Table 9
Support of Friends and Family Toward Youth Enlistment in the Army

Attribute		Percentage of Population
For each of the following people, please tell me how you think they would feel about your enlisting in the Army.		
Father		
	Bad/very bad idea	23.3
	Neutral/Not Applicable	32.0
	Good/very good idea	44.6
Mother		
	Bad/very bad idea	39.6
	Neutral/Not Applicable	32.3
	Good/very good idea	28.1
Friends with Army experience		
	Bad/very bad idea	13.7
	Neutral/Not Applicable	25.6
	Good/very good idea	60.8
Friends with other military experience		
	Bad/very bad idea	14.0
	Neutral/Not Applicable	31.7
	Good/very good idea	54.2
Friends with no military experience		
	Bad/very bad idea	52.4
	Neutral/Not Applicable	34.3
	Good/very good idea	13.3

Unweighted N=2,371 youth.

Table 10
Parental Attitudes Toward the Army

Attribute	Importance[1]	Perception[2]	Mean Attitude Score
Becoming more mature and responsible	90.4	74.8	5.0
Developing leadership skills	83.8	54.9	4.0
Developing potential	93.6	67.2	3.4
Developing self-confidence	92.7	59.1	4.4
Earning money for education	71.6	69.4	4.4
Experiences to be proud of	91.2	67.5	4.5
Having a mental challenge	87.9	63.1	3.2
Having a physical challenge	73.5	58.8	4.2
Highly trained coworkers	65.2	72.4	3.8
Training in useful skills	87.0	65.3	3.9
Working with high-tech equipment	75.6	53.5	4.2

[1]Includes the two most positive response categories.

[2]Includes the response categories "Agree Somewhat" and "Agree Completely."

Unweighted N=2,371 parents.

Importance ratings were generated from the following item:

> In thinking about your plans for the next year, please tell me how important it is that you have opportunities for the following things.
>
> Use a scale of 1 to 5 where a "1" means it is not at all important and "5" means it is very important.

Parental Perception of Active Army Attributes. Parents also indicated the extent they agreed that each attribute was offered by the Active Army. The response scale paralleled that use for youth. There was a wide range between attributes rated highest and lowest by parents. Three-quarters (74.8%) of parents agreed that the Active Army offered the opportunity to "Become more mature and responsible," and slightly over one-half (53.5%) agreed that the Army offered the opportunity to work with high-tech equipment (see Table 10).

Perception ratings were generated from the following item:

> I am going to read you a list of statements describing different things the Army might offer. Please tell me how much you disagree or agree that the Army offers each item on the list. A "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat, and "5" means you agree completely.

In comparing youth and parent ratings, more youth believed that the various attributes were offered by the Army than did their parents. The greatest disparity was found for "develop potential," (73.2% among youth versus 59.1% among parents) and "highly trained coworkers" (77.1% of youth compared to 63.1% of parents).

For importance, several attributes exhibited substantial differences between parents and youth in rated importance. The greatest difference occurred for "working with highly trained coworkers." Four-fifths (81.7%) of youth rated this attribute as important, compared with 65.2% of parents.

Attitude Scores for Parents. The same procedure used to create attitude scores for youth were used for parents. Hence, parental attitude scores ranged from -10 to 10. Compared to youth, twice the percentage of parents held negative (11.4% , compared to 4.2% for youth) or neutral (7.1% versus 3.8%) attitude scores. In fact, one-quarter (24.6%) of the parents had summary attitude scores of 1, 2, or 3; while 28.6% scored between 4 and 6. The remaining one-quarter (28.3%) scored 7 or greater on the scale. Youth, therefore, were generally more positive toward the Army than were their parents.

Parental Preference for Youth

Parental attitudes toward the Army were hypothesized to influence their career preferences for their sons. Parental preference for their son's career choices was measured with the following item:

> What would you like to see (name) do in the future? Would you like him to: ...

The responses were recoded to include five categories: "Go to college," " votech school," "full-time job," "enlist in the Armed Services," and "something else." Almost two-thirds (63.2%) of the parents reported wanting their sons to attend college, versus 9% wanting their sons to enlist in the military (see Table 11).

Communication with Youth Regarding Army

Parent's career preferences for their sons linked the influence of parental attitudes toward the Army on communication with their son's regarding the Army. To assess the level and quality of this communication, particularly with regard to enlistment, three variables were constructed. One variable measured the extent to which parents talked with their sons regarding the youth's future plans. A second variable measured the amount of influence the parent felt he/she had over the youth's plans. A third variable described the frequency of parent-youth discussions concerning military enlistment. Communication with youth regarding the Army was hypothesized to influence youth enlistment through its influence on the subjective norms about Army enlistment.

General Discussions about the Future. Discussions about the future reflects the degree to which parents discussed general plans for the future with their sons. Information on both the frequency of such discussions and whether or not parents give opinions during them were incorporated. Table 12 shows the applicable responses. This variable was constructed using the following items:

> How often have you had such discussions in the past 12 months? Was it never, rarely, occasionally, or often?
>
> During these talks, do you typically give your opinions or do you try to stay neutral?

Table 11
Parental Preference

Category		Percentage of Population
Parent plans for youth:	Go to college	63.2
	Attend vo-tech school	16.8
	Join the armed services	8.9
	Get a full-time job	7.8
	Other	3.3

Unweighted N=2,371 parents

Table 12
Indicators of Parental Influence

Category		Percentage of Population
Discussion of Future Plans	Never/rarely talks about youth's plans	10.7
	Occasionally/often talk; don't know if gives opinion	1.9
	Occasionally/often talk; stays neutral	39.8
	Occasionally talk; gives opinion	19.6
	Often talk; gives opinion	28.0
Encouragement of Enlistment	Neither pointed out military ads nor suggested seeing a military recruiter	66.0
	Either pointed out military ads or suggested seeing a military recruiter	24.2
	Both pointed out military ads and suggested seeing a military recruiter	9.8
Frequency of Military Discussions	Never	37.8
	Rarely	14.1
	Occasionally	33.3
	Often	14.9

[1]Among parents who often or occasionally talked with youth about enlisting.

Unweighted N=2,371 parents.

Parental Encouragement of Enlistment. Parental encouragement of enlistment reflects the degree to which parents attempted to influence youth enlistment by pointing out military advertisements and encouraging youth to see a military recruiter. Table 12 shows the applicable responses. This variable was constructed use the following items:

> Have you drawn your {son/daughter}'s attention to ads for the military services in the mass media? (Yes/No)
>
> Have you talked with your {son/daughter} about seeing a military recruiter? (Yes/No)

Military Discussions. Military discussions reflect the frequency of which parents talked about the military with their sons. Applicable responses included: never; rarely; occasionally; and often. These variables were constructed using the following items:

> Have you talked to {YOUTH'S FIRST NAME} about enlisting in the Armed Services? (Yes/No)
>
> How often have you talked about this?

Table 12 summarizes responses to these communication variables. For discussion of future plans, the largest percentage of parents (39.8%) said that they occasionally or often had discussions, and did not express an opinion during those discussions. Another 28.0% said they often talked with the youth and gave their opinion during these talks. Regarding enlistment, one-third (33.3%) of parents reported occasionally speaking with the youth about enlisting in the military, and another 14.9% said they often did so. However, 37.8% never had discussions with the youth about the military intent.

Parent Knowledge About Army Benefits

The model path linking parent attitudes to parental preference to communication behaviors to subjective norms represents the core parental influence path as hypothesized. However, as with the youth portion of the model, several cursory variables existed in the parent portion of the model. One such variable was a measure of the parent's knowledge of Army benefits which was hypothesized to influence parent attitudes toward the Army. This variable ranged from 0 to 6, corresponding to the number of correct responses to the following items:

> Is it possible to earn money for college by enlisting in the Army? (Yes/No)
>
> How much do you think can be earned through Army education benefits? Do you think Army education benefits are more, less, or about the same as the Navy, Air Force, or Marines offer?
>
> Please tell me whether or not the Army offers the GI Bill.
>
> What is the minimum number of years that a new recruit has to serve on active duty in the Army?
>
> Is it possible to sign up for the Army and actually start serving one year later? (Yes/No)

Table 13 presents item and composite level information on knowledge of Army benefits. As shown, levels of awareness differed by the benefit in question. Most of the parents (87.9%) agreed it was possible to earn money for college by enlisting in the Army. However, only one-quarter (26.%) of these knew that the Army benefits could total $15,000 or more, and few (4.6%) knew that Army benefits were greater than those offered by the other Services. Slightly over one-third (36.1%) of the parents knew that 2 years was the minimum term for active Army enlistment, but responses of 3 and 4 years were selected by another one-quarter of parents each.

The same pattern displayed by youth regarding the number of questions correctly answered existed for parents. Over one-half (51.1%) of the parents could not correctly answer any of the six

Table 13
Knowledge of Army Offers Among Parents

Offer[1]		Percentage of Population[2]
Possible to earn money for college by enlisting in the Army		87.9
Amount of Army benefits[3, 4]		
	Under $5,000	5.4
	$5,000-$9,999	7.9
	$10,000-$14,999	10.2
	$15,000-$19,999	11.4
	$20,000-$24,999	7.3
	$25,000 or more	7.9
Army benefits in comparison to Navy, Air Force, and Marine Corps offers[3, 4]		
	More	4.6
	Less	6.3
	About the same	75.8
Army offers GI Bill		78.4
Navy offers GI Bill		60.7
Air Force offers GI Bill		61.2
Marine Corps offers GI Bill		61.4
Minimum number of years for active Army enlistment[4]		
	One	1.3
	Two	36.1
	Three	24.8
	Four	25.3
	Five or more	1.6
Army would pay for entire college education:		
	Yes	38.8
	No	47.6
Total Number Correct		
	None	51.1
	One	4.2
	Two	8.2
	Three	17.0
	Four	14.6
	Five	4.5
	Six	0.5

[1]Asked of a random one-half of all youth. Estimates are based on interviews with approximately 1,157 parents.

[2]"Don't Know" and "Refused" included as valid, but incorrect, responses.

[3]Asked of parents who said it was possible to earn money for college by enlisting in the Army.

[4]Correct answer(s) underlined.

questions. An additional 17.0% answered one-half (three) of the questions correctly, while 14.6% correctly answered four of the six questions.

4. Analytic Methodology

This chapter describes the analytic methodology used for estimating and evaluating the model of youth intentions and enlistment behaviors hypothesized in Figures 3 and 4. The first section presents an overview of the statistical technique used in the modeling process, including theoretical background, steps involved in model specification, model estimation, and model evaluation. The second section discusses the strategy for analysis resulting in the findings presented in Chapter 5.

The statistical methodology adopted for our modeling of youth enlistment intentions and behaviors is most generically termed structural equation analysis. Several statistical software packages support such analyses including the Statistical Analysis System (SAS) and BioMedical Data Processing (BMDP). Perhaps the most frequently used software for conducting structural equation analysis, however, is LISREL® (LInear Structural RELations) developed by Karl Jöreskog and Dag Sörbom (1989). This modeling effort employed the LISREL® software. We will therefore refer t LISREL® o covariance structure models as LISREL® models, and will adopt its terminology in this report.

The LISREL® methodology requires a comprehensive interaction between theoretical expectation and statistical specification, estimation, and evaluation. Theory and/or model specification must not only address the hypothesized relationships among major model constructs, their measurement must be specified as well as the expected error/covariance structure among both observed and unobserved measures. In this way LISREL® models are at once much more flexible and more practically/theoretically demanding than traditional regression or factor analyses for the theorist/analyst. LISREL® analysis can be characterized as a sophisticated amalgam of systems regression and factor analysis techniques. The structural relations among model constructs are statistically related much like those in systems regressions. Likewise, the measurement of latent constructs are obtained much as in a factor analysis. However, the LISREL® methodology differs from the regression and factor analytic analogy in two respects. First, both the structural and measurement models are estimated simultaneously. Second, the specification of error structures for both the measurement and structural must be articulated prior to estimation. Through the use of a hypothetical example, a more comprehensive representation of the general LISREL® model will be presented.

Overview of Statistical Methodology

LISREL® models require the specification (parameterization) of eight matrices: measurement matrices, structural matrices, and error/covariance matrices. Figure 5 presents a hypothetical LISREL® model in path diagram form. Latent variables are distinguished by oval shapes (the ξ's and η's), observed measures are distinguished by rectangles (the X's and Y's), error terms are represented by the δ's and ε's, and the structural coefficients are associated with path arrows. In order, we will consider the components of this hypothetical model (measurement, structure, error) as a platform for considering the model of youth enlistment intentions and behaviors.

LISREL® measurement models. The LISREL® measurement model operationalizes the relationship between observed variables and latent variables. Within the measurement model, variables are segmented according to whether they have hypothesized predictors within the model, endogenous variables, or whether they are not explained by the model, exogenous variables. In Figure 5, endogenous latent variables are represented by eta (η) and exogenous latent variables are represented by ksi (ξ). The observed indicators for endogenous latent variables are depicted by y and observed indicators for

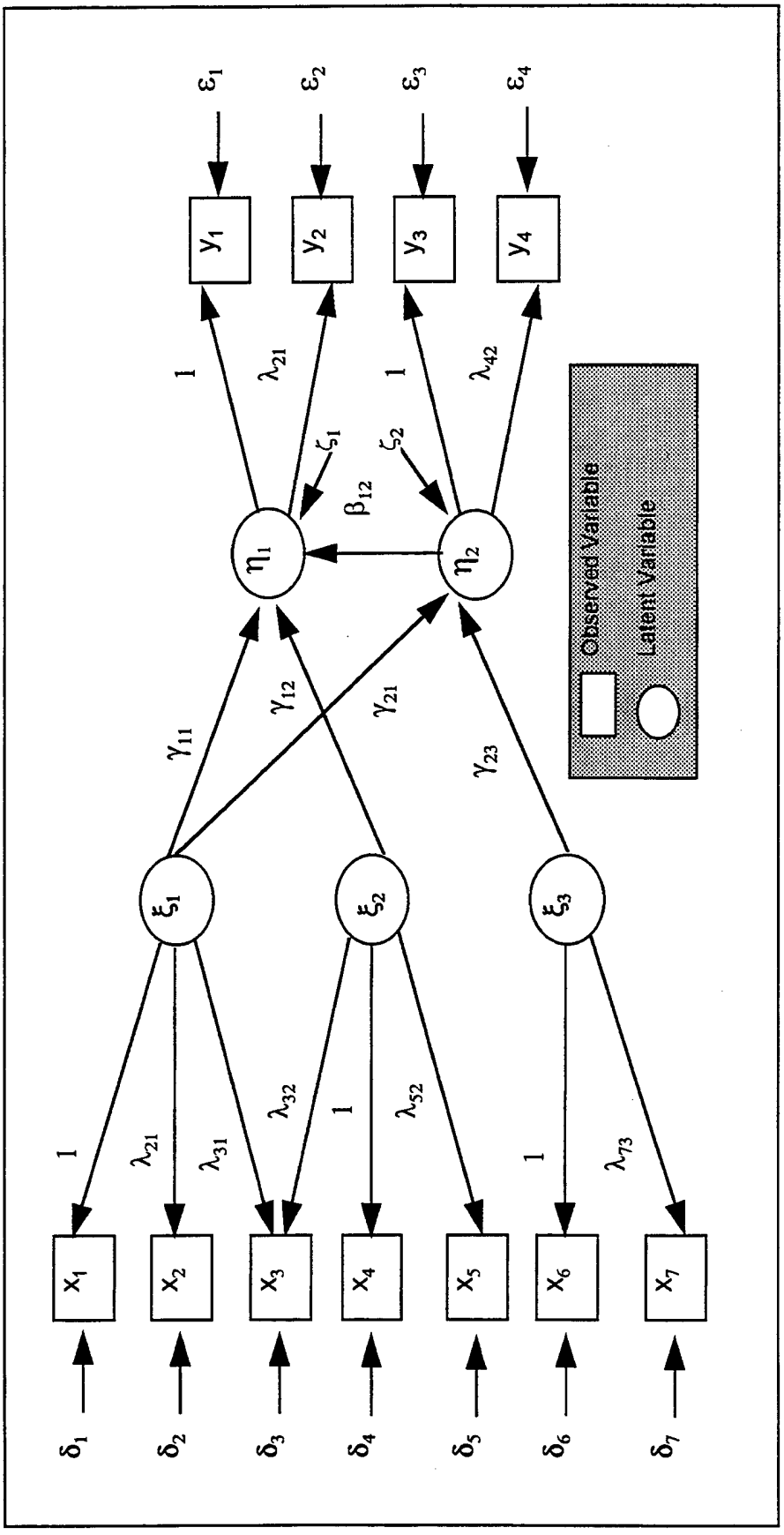

Figure 5. Annotated example LISREL diagram.

exogenous latent variables are represented by x. The arrows point from latent variables to observed variables.

Typically, observed variables are measured with error. LISREL® explicitly acknowledges measurement error by incorporating error components for all observed variables. In Figure 5, error terms for the y and x observed variables are represented by epsilon (ε) and delta (δ), respectively. As with latent variables, the arrows pointing from error terms to observed variables denote that error represents a causal component of the observed variable. This feature of LISREL® allows the investigation to isolate the non-error component, that portion of the variable of most interest to researchers. Furthermore, if the reliability of the variable is known (i.e., from past research) then the specific portion of variability representing error can be preset. While most researchers acknowledge the existence of errors in variable measurement, many statistical procedures do not allow modeling of this property. Even more advanced modeling procedures, such as systems regressions, generally assume variables are measured without error. This assumption often forces researchers to disregard useful measures that have do not meet strict reliability requirements, yet hold utility for investigative purposes.

The final component of the measurement model includes the parameter coefficients, indicated by lambda (λ) in Figure 5, which depict the strength of the relationship between latent and observed variables. In the measurement model, parameter coefficients operate analogous to regression coefficients or factor scores.

LISREL® structural models. The second component of a LISREL® model, the structural model, depicts the causal relationships among latent exogenous and latent endogenous variables. While latent endogenous variables may interact causally, latent exogenous variables function as causal antecedents only. That is, the latent exogenous variables are not to be explained by the model. Arrows among the latent variables in Figure 5 show the hypothesized causal direction and relationship for the structural model.

Figure 5 shows that latent endogenous variables can be influenced by latent exogenous variables and/or other latent endogenous variables. The effects of the former are indicated by gamma (γ) and the effect of the latter by beta (β). Both gamma and beta represented structural coefficients depicting the strength and nature of the causal relationship. As with regression models, the structural model contains an error in equation component as well, indicated by zeta (ς). Thus, the structural model depicts each endogenous latent variable in terms of its hypothesized causal antecedents, plus an error in explanation component.

The preceding discussion shows that LISREL® models simultaneously incorporate the measurement of variables and the estimation of relationships among those variables. Thus a primary advantage to using LISREL® is that it affords the combining of measurement issues in the context of hypothesis and theory testing.

LISREL® error variance/covariance models. The final feature of LISREL® models that must be specified is the error variance/covariance structure among observed and latent variables. The implications of error specification are exceedingly model-specific; therefore, discussion of error specification will be undertaken in Chapter 5.

To underscore the power of LISREL, it should be noted additionally that LISREL® can employ a variety of "full information" techniques to estimate parameters. Such techniques apply to multiple equation systems, solving any one equation while accounting for restrictions specified in other equations.

Thus, LISREL® controls for the possibility that the simultaneous causation effects may be misinterpreted if "between equation" restrictions are overlooked. This amounts to full, simultaneous assessment of causal models as opposed to piecemeal assessment of multivariate relationships.

Specifying LISREL® models. Prior to estimating model parameters, the form of LISREL® models must be fully specified according to expectations set forth by theoretical framework. This is accomplished with a series of equations describing the hypothesized relationships among both latent and observed variables. These equations pertain to all relationships in the measurement and structural components of a LISREL® model. Using matrix notation and terminology, the components of the sample LISREL® model in Figure 5 are shown below. Matrix notation corresponds to the LISREL® output presenting model specifications and parameter estimates. It should be noted, however, that matrix notation is simply an alternative format of writing the algebraic equations.

Measurement Model: The measurement model for exogenous variables is represented in matrix notation as:

$$\mathbf{x} = \Lambda_x \xi + \delta$$

$$\begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \\ x_6 \\ x_7 \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 \\ \lambda_{21} & 0 & 0 \\ \lambda_{31} & \lambda_{32} & 0 \\ 0 & 1 & 0 \\ 0 & \lambda_{52} & 0 \\ 0 & 0 & 1 \\ 0 & 0 & \lambda_{73} \end{bmatrix} \begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \end{bmatrix} + \begin{bmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \\ \delta_5 \\ \delta_6 \\ \delta_7 \end{bmatrix} \qquad (4.1)$$

$7 \times 1 \qquad 7 \times 3 \qquad 3 \times 1 \qquad 7 \times 1$

Likewise, the measurement model for endogenous variables is represented by the following matrix equation:

$$\mathbf{y} = \Lambda_y \eta + \varepsilon$$

$$\begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \end{bmatrix} = \begin{bmatrix} 1 & 0 \\ \lambda_{21} & 0 \\ 0 & 1 \\ 0 & \lambda_{42} \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \end{bmatrix} + \begin{bmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \varepsilon_3 \\ \varepsilon_4 \end{bmatrix} \qquad (4.2)$$

$4 \times 1 \qquad 4 \times 2 \qquad 2 \times 1 \qquad 4 \times 1$

As noted above, exogenous and endogenous variables are treated separately in the measurement model. In these equations, a vector of observed variables ($\mathbf{x}$ or $\mathbf{y}$) is the function of a matrix of coefficients (Λ_x or Λ_y) representing the effects of a vector of latent variables (ξ or η), plus a vector of error terms (δ or ε). Boldface symbols denote that the matrix contains all the model estimates represented by that particular symbol. Hence ξ represents the matrix containing all exogenous latent variables, ξ_i. This measurement component of LISREL® is analogous to confirmatory factor analysis (Long, 1983).

Algebraic equations can be written from the matrix notation. These equations are analogous to regression or factor equations. The following equations illustrate select relationships from the measurement component of the model in Figure 5:

$$x_1 = 1.0\xi_1 + \delta_1 \quad (4.3)$$

$$y_2 = \lambda_{21}\,\eta_1 + \varepsilon_2 \quad (4.4)$$

Equations 4.3 and 4.4 show that observed variables, whether endogenous or exogenous, result from the effects of a latent variable and error.

Note that some parameter estimates are set equal to 1.0 in Figure 5 and equation 4.3. This is a LISREL® convention which establishes the latent variable scale of measurement as equivalent to that of the corresponding observed indicator. Thus in equation 4.3, the latent variable ξ_1 will have the same measurement scale as observed variable x_1. This increases the behavioral interpretability of LISREL® results because latent variables, unless specifically established, lack a definable metric.

Similarly, zeros in the matrix indicate that no parameter is being estimated. This could mean that no relationship is hypothesized or that the parameter has been set to equal the value of another parameter in the model. In either situation, LISREL® does not estimate a parameter for the relationship represented by the zero value.

Structural Model: The components of the structural model are represented by the following matrix equation:

$$\eta = B\,\eta + \Gamma\,\xi + \zeta$$

$$\begin{bmatrix}\eta_1\\ \eta_2\end{bmatrix} = \begin{bmatrix}0 & \beta_{12}\\ 0 & 0\end{bmatrix}\begin{bmatrix}\eta_1\\ \eta_2\end{bmatrix} + \begin{bmatrix}\gamma_{11} & \gamma_{12} & 0\\ \gamma_{21} & 0 & \gamma_{23}\end{bmatrix}\begin{bmatrix}\xi_1\\ \xi_2\\ \xi_3\end{bmatrix} + \begin{bmatrix}\zeta_1\\ \zeta_2\end{bmatrix} \quad (4.5)$$

$2 \times 1 \qquad 2 \times 2 \qquad 2 \times 1 \qquad 2 \times 3 \qquad 3 \times 1 \qquad 2 \times 1$

In this equation, a vector of latent endogenous variables (η) is depicted in terms of the effects from other latent endogenous and latent exogenous variables, plus a disturbance factor. The effect of latent endogenous variables is represented by the matrix of structural coefficients, B, which represent the effects from the corresponding vector of endogenous latent variables, η. Similarly, the effect of latent exogenous variables is represented by the matrix of structural coefficients, Γ, and the corresponding vector of exogenous latent variables, ξ. Finally, ζ represents a vector of disturbance terms accounting for error in structural equations. That is, latent endogenous variables result from the influence of other latent endogenous variables, latent exogenous variables, plus some error in equations. This component of the LISREL® model resembles path analytic models.

Again, algebraic equations can contain the same information as the matrix notation. Equation 4.6 provides an example of the structural equation depicting causal antecedents to η_1.

$$\eta_1 = \gamma_{11}\,\xi_1 + \gamma_{12}\,\xi_2 + \beta_{12}\,\eta_2 + \zeta_1 \quad (4.6)$$

Referring to Figure 5, all variables hypothesized to cause η_1 are contained in the structural equations, whether algebraic or matrix notation is used.

Variance/Covariance Model: Four additional matrices are needed to specify a LISREL® model. These matrices, shown below, represent the following relationships:

ϕ	The covariance among the exogenous latent variables;
φ	The error covariance among the endogenous latent variables;
θ	The error covariance among the exogenous observed variables; and
θ_δ	The error covariance among the endogenous observed variables.

$$\begin{matrix} \phi & & \varphi & & \theta_\epsilon & & \theta_\delta \end{matrix}$$

$$\begin{bmatrix} \phi_{11} & & \\ \phi_{21} & \phi_{22} & \\ \phi_{31} & \phi_{32} & \phi_{33} \end{bmatrix} \begin{bmatrix} \varphi_{11} & \\ \varphi_{21} & \varphi_{22} \end{bmatrix} \begin{bmatrix} \theta_{11} & & & \\ 0 & \theta_{22} & & \\ \cdot & & \theta_{33} & \\ 0 & & & \theta_{44} \end{bmatrix} \begin{bmatrix} \theta_{11} & & & & & & \\ 0 & \theta_{22} & & & & & \\ \cdot & & \theta_{33} & & & & \\ \cdot & & & \theta_{44} & & & \\ \cdot & & & & \theta_{55} & & \\ \cdot & & & & & \theta_{66} & \\ 0 & & & & & & \theta_{77} \end{bmatrix} \quad (4.7)$$

The specific nature of these four matrices is also determined by theoretical considerations. For instance, error terms for observed variables are typically assumed to be uncorrelated. Thus, the off-diagonal elements of any matrix containing error components for observed variables would not be estimated. This is illustrated above by displaying only the diagonal elements of θ_ϵ and θ_δ; only these values will be estimated. In Figure 5, no relationships among error terms of observed variables are specified.

All of the above eight matrices provide the basis for which LISREL® parameter estimates are obtained. These coefficients depict the hypothesized causal relationships among all variables, in both the measurement and structural models, as well as error relationships.

Estimation. Estimation occurs when an implied, or hypothesized, covariance matrix (Σ) is sought based on the specifications in the model. This matrix is compared with the covariance matrix among the observed variables (S). LISREL® modeling provides an assessment of the extent to which the observed variable covariance reflects the hypothesized variable covariation (Long, 1983).

Methods of parameter estimation available in the LISREL® program include ordinary least squares, generalized least squares, weighted least squares, and maximum likelihood, to name a few. Model restrictions and underlying variable characteristics determine the appropriateness of each estimation procedure. Regardless of the specific estimation procedure, however, each operates from the same basic theoretical goal: To produce the best approximation of the implied covariance matrix, Σ, for which the observed covariance matrix, S, might result.

In this study, weighted least squares (WLS) was used to obtain parameter estimates. WLS is an asymptotically distribution-free procedure and thus recommended with ordinal data (Hayduk, 1989). Also, WLS produces asymptotically correct standard errors of parameter estimates and an asymptotically correct chi-square goodness of fit measure. As noted in Jöreskog and Sörbom (1993):

> If some or all of the observed variables are ordinal or discrete, the matrix of polychoric correlations should be analyzed with the WLS method, using the correct weight matrix... The LISREL® methodology is misused when arbitrary scale scores (1, 2, 3, ...) for categories are treated as scores with interval scale properties. In particular, it is wrong to compute a covariance matrix or product-moment (Pearson) correlation matrix for such scores, or mixtures of ordinal and interval scale scores and analyze them with either the ML or GLS method. (p. 225)

Evaluation. Once parameter estimates are obtained, the tenability of LISREL® solutions can be evaluated using various indices. One class of indices pertains to the overall fit of the model, where "fit" concerns the closeness between the implied and observed covariance matrix. The chi-square represents one of several overall model fit indices available in LISREL®. Actually, the chi-square is a "badness-of-fit" measure and, if significant, the model is usually interpreted as implausible for the sample data. A more definitive statement concerning this measure is not warranted because of the substantial dependence of the chi-square value on sample size. For instance, if a sample is very large (e.g., N = 5,000), the power for the test is great and virtually any value will be significant, meaning almost no model will fit.

A second overall fit measure, the goodness of fit index (GFI), provides "a measure of the relative amount of variances and covariances jointly accounted for by the model" (Jöreskog & Sörbom, 1981, p. I.41). This index is more interpretable having a typical range from zero to one, with one indicating perfect model fit. Additionally, this index may be used to compare the fit of models to different sets of data. The related adjusted goodness of fit index (AGFI) is comparable to the GFI, but adjusted for degrees of freedom.

A final set of overall fit indices given by LISREL® involve residuals, or the difference between values in the implied and observed covariance matrices. The root mean square residual represents the average of the fitted residuals and may be used to compare models fitted to the same data. And LISREL® provides a point estimate of the root mean square error of approximation (RMSEA; cf. Steiger, 1990; Steiger & Lind, 1980), which Browne and Cudeck (1993) describe as "a measure of the discrepancy per degree of freedom for the model (p. 144)." For these latter indices, perfect model fit is indicated by the lower bound value of zero.

Beyond the overall fit indices, LISREL® model solutions should be evaluated according to similar criteria evoked in evaluating outcomes from other multivariate statistical procedures. For example, anomalies such as negative error variances, extremely large standard errors for parameter estimates, or correlations greater than one signal poor model fit or mispecification. Similarly, the internal structure of the model should be evaluated. For instance, individual item and composite reliabilities should be adequate.

Interpreting Coefficients. The measurement model of LISREL® is essentially a confirmatory factor analysis. As such, the resulting parameter coefficients are interpreted like regression or factor score coefficients. Hence, lambda (λ_{ij}) represents how much a unit change in a particular latent variable affects the respective observed indicator.

While the same logic holds for the structural model, additional facets of LISREL® modeling must be considered. Namely, beta (β_{ij}) and gamma (γ_{ij}) represent only the direct effects of endogenous and exogenous latent variables, respectively, on a particular endogenous latent variable, holding all other variables constant. However, holding all other variables constant may not occur in LISREL® modeling. For example, a change in a single exogenous variable often results in changes in many other variables in the model.

To illustrate these points, refer again to Figure 5. In terms of the measurement model, a one-unit change in ξ_1 will produce a change of λ_{21} in x_2. For the structural model, a one-unit change in ξ_1 will produce an overall change of γ_{11} on η_1; a one-unit change in $\xi 1$ does not affect any other variables that influence η_1. Thus, all other variables are held constant. However, the one-unit change in ξ_1 produces a greater change on η_2 than indicated by γ_{21}, because ξ_1 indirectly influences η_2 through the effects on η_1. This latter point illustrates the difference between direct, indirect, and total effects. Thus, while direct effects can be interpreted in the regression mode, indirect effects, if present, must also be considered to understand the total influence of one variable on another. LISREL® provides indices for direct, indirect, and total effects. For direct and indirect effects, all other variables are assumed to be held constant.

Analysis Strategy

Structural equation modeling using LISREL® ideally enforces a correspondence between theory and the empirical data being summarized. As shown above, the model specification stage must be guided by theoretical considerations. This has been the intention in the present effort. Careful attention was given to both the theoretical concepts and the empirical indicators supplied by the ACOMS survey and MEPS data, and their roles within the theoretical framework of the Fishbein and Ajzen model as applied to enlistment intentions. As documented elsewhere, preprocessing of survey data and variable construction enhance the articulation of the constructs included in the theoretical model. At the conclusion of this data processing effort, the general analysis strategy followed was:

- Specification of initial model. Chapter 2 describes the initial identification and specification of the theoretical concepts investigated. As noted, the initial model was based on the Fishbein and Ajzen model of reasoned action and was expanded to incorporate known influences of youth enlistment propensity. Chapter 3 and Appendix B describe the model variables in detail.

- Estimation of the measurement model for each theoretical construct. The properties of the theoretical constructs were assessed prior to full-scale modeling efforts. This basically involved some preliminary analysis on various groups of variables designed to examine distribution properties and any measurement anomalies. Especially important in this effort were measures representing youth and parental attitudes, as well as youth and parental influences on enlistment intention. This phase provided an initial check on the model viability.

- Estimation of youth and parental models separately. At this stage in the analysis, structural relations among theoretical concepts among parent and youth components were investigated separately. This allowed for further preliminary model modifications and identification of data problems likely to hinder full-model assessment. Particularly useful in this stage was the investigation of the parental

aspect of the model because the Fishbein and Ajzen model falls short of addressing such influence.

- Linkage/estimation of linked youth/parent models. This stage of the analysis revealed significant departures from the Fishbein and Ajzen model in the effect of social influences (parents). Chapter 5 details the results of the full-scale model evaluation effort.

This analysis strategy is substantially that recommended by Jöreskog and Sörbom (1993) in their discussion of LISREL® modeling. Results of the covariance structure modeling of ACOMS data will be summarized in Chapter 5.

5. Army Enlistment Models

The present analysis of ACOMS survey data using structural equation modeling has significantly expanded the quantitative understanding of influences on youth enlistment intentions and behaviors (visiting a MEPS in preparation for entry into the military). Two basic models were estimated, one using data gathered from youth alone (the youth model), and one using ACOMS survey data collected from both the youth and their parents (the linked model). Each basic model was further subdivided into an Army enlistment model and a general military enlistment model, yielding a total of four estimated models. This chapter presents the results of this analysis for the Army enlistment models. Appendix D summarizes results from the modeling of the general military enlistment model.

Several important findings underscore the utility of these analyses and point toward future efforts that may yield even more results. First, the predictive ability of the youth and linked models, as summarized by their percentages of variance explained, is exceptional. Use of such models with contemporary surveys could materially improve the Army's understanding of the recruiting environment and increase its ability to forecast changing characteristics of that environment. Second, the importance of parental attitudes and behaviors has been demonstrated to influence youth enlistment behaviors. This influence is substantial. Inclusion of parental responses regarding communications with their son nearly doubled the explanatory power of the model.

All findings presented in this chapter are based on the analysis of unweighted ACOMS survey data. Although ACOMS survey data contain adjustment weights, these weights were not used during analysis. Several considerations led to the decision not to use survey weights: (1) the relatively small (approximately 1.4) design effect observed for the youth of interest, (2) similarities in weighted and unweighted analysis results, and (3) the great complexities that would be introduced with the use of weighted data. The youth of interest in these analyses are relatively more homogeneous than ACOMS youth overall. Only males 16 to 20 years old, currently in high school or college or with a high school diploma, were included in the study. By contrast, the full ACOMS sample contained both males and females spanning the ages from 16 to 24, and included individuals other than those in school or having a high school diploma.

In addition to exhibiting fairly modest design effects, when weighted and unweighted results were compared, the differences proved ignoreable. Tabular and regression analyses were performed using both weighted and unweighted data. The unweighted analyses were performed using the Statistical Analysis System (SAS) and the weighted analyses were performed using WESVar and WESReg (SAS user procedures written by Westat for the analysis of complex survey data). A comparison of estimated percentages, regression coefficients, and standard errors led to the finding that point estimates (percentages and regression coefficients) were essentially the same for the weighted and unweighted analyses. There were generally systematic differences in the standard errors with the weighted estimates being between 15 and 35% higher than the unweighted estimates. Based on these findings, it was concluded that analysis could proceed using unweighted survey data if care was used in the examination of estimated standard errors.

This chapter contains three major sections discussing, in turn, the youth Army enlistment model, the linked youth and parent Army enlistment model, and characteristics of the statistical fit of these two models.

Youth Army Enlistment Model

Using the Fishbein and Ajzen (1975) theoretical framework as a guide, the youth Army enlistment model evolved during the process of statistical estimation. Indicators for some concepts proved to have poor measurement characteristics while other concepts appeared to have no connection at all with other model concepts. The statistical models discussed in this chapter, therefore, contain some significant departures from the conceptual model presented in Figures 3 and 4.

Figure 6 summarizes the youth Army enlistment model at the conclusion of structural equation modeling. (Description of the variables contained in this figure is provided in Chapter 3 and Appendix B.) This figure uses conventions typically applied to path and structural equation models. That is, observed or measured variables (in this case, responses to survey questions, and actual MEPS records) are drawn as rectangles, and latent variables underlying the observed variables are shown as ovals. The arrows in the figure show both the specified relationships in the model as well as the direction of hypothesized influence. Arrows from latent to observed variables show the measurement models adopted in this effort. This figure also shows the error terms (or unique component) associated with the observed variables. Structural relationships in this model are specified by the arrows connecting latent variables. (To simplify presentation, Figure 6 does not include error terms for the endogenous mesured variables.) Figure 6 also indicates the standardized coefficients for the structural relationships specified in this model.

This model specifies that Army enlistment intentions are influenced by youth attitudes toward the Army; work and college intentions; and intermediate behaviors toward civilian jobs, college, and the Army. Enlistment intentions are also influenced by various social influences, as perceived by the youth: parental approval of the youths' enlistment, friend's approval of the youth's enlistment, and youth perceptions that similar others are enlisting in the military. The figure also shows that enlistment intentions are expected to influence actual enlistment behaviors directly.

This specification of the youth model does not include all the variables presented in the conceptual model discussed in Chapter 2. The downsizing of models estimated reflect difficulties encountered during statistical modeling. For example, the initial stages of data exploration showed that one of the latent constructs, knowledge about Army benefits, did not correlate strongly with any other variables in the model. Therefore, knowledge was dropped from this model.

In addition, the conceptual model included various demographic variables that were expected to play a substantial role in the analyses. Among the demographic characteristics of interest were gender of parent, youth and parent socioeconomic status (SES), and youth's race/ethnicity. Parent gender was not included in the model as it proved to be highly collinear ($r > 0.9$) with another important indicator - parent prior military service. Future analyses should consider either dropping the prior military service indicator and including parental gender or building separate models for mothers and fathers. It was also hoped that separate models could be developed for Black and White youth. A comparison of results with a White youth model and a Black youth model would have tested the hypothesis that the dynamics of enlistment intentions and behaviors are the same for White and Black youth. Unfortunately, the small number of Black youth surveyed precluded this effort. Finally, although the measurement of socioeconomic status using both income and education is commonly encountered in the research literature, we were not able to construct a stable measure of SES. Our difficulties here are most likely a combination of measurement and specification problems. Difficulties such as those recounted here led to the decision to generally exclude demographic characteristics from the current models. Future analyses should address the difficulties summarized here.

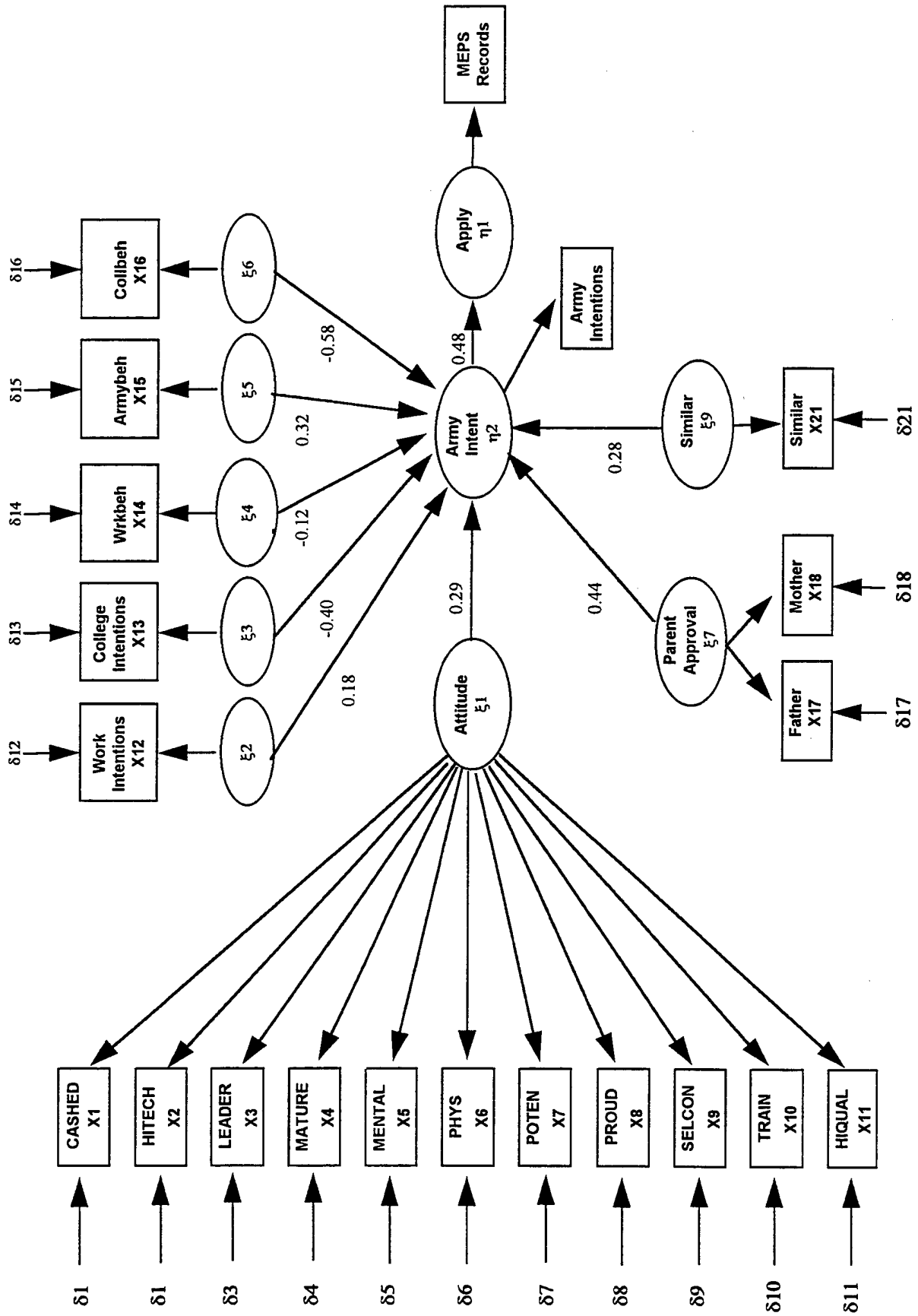

Figure 6. Final ACOMS youth Army enlistment model.

One latent variable included in the initial model specification, friend's approval of the youth's enlistment, has been dropped. This latent construct was removed from the model because of its lack of fit. It is suspected that this lack of fit is not an indication of lack of importance of this concept; rather, the suspicion is that the relationship between friend and youth enlistment intentions is nonlinear. With these changes noted, the modeling of Army enlistment intentions and behaviors has remained very true to initial model specification.

Youth Army Measurement Models. This section introduces the measurement models adopted and estimated for the youth Army enlistment modeling effort. The models are first presented as matrix equations; then the estimated models are presented. The matrix specification of the models provides an overview of the structure of the models and highlights some salient model features. Presentation of the estimated models provides indications of model adequacy.

The estimated exogenous and endogenous measurement models for the youth Army enlistment model are presented below. These measurement models contain some features deserving discussion. First, a number of coefficients in the Λ_x and Λ_y matrices have been set equal to one. These coefficients were fixed to scale the metric of the corresponding latent construct (ξ_i or η_i). Latent variables are, by definition, unobserved and have no intrinsic metric. Two methods are commonly used to define a latent variable's scale. These are to: (1) assume that the latent variables are standardized and therefore are distributed normally with zero means and unit variance in the population, and (2) set the latent variable to have the same metric as its observed indicators. The second alternative was chosen to facilitate interpretation of findings. With this convention adopted, a unit change in the latent variable Army intentions is interpreted as a change of one scale value in the observed propensity variable. Therefore, the model can predict actual propensity responses of surveyed individuals given their responses to exogenous survey items.

Matrix Specification - Youth Army Endogenous Measurement Model

$$\begin{bmatrix} y_1 \\ y_2 \end{bmatrix} = \begin{bmatrix} 1.0 & 0 \\ 0 & 1.0 \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \end{bmatrix} + \begin{bmatrix} \epsilon_1 \\ \epsilon_2 \end{bmatrix}$$

$$\mathbf{y} = \Lambda_y \eta + \varepsilon \qquad (5.1)$$

Matrix Specification - Youth Army Exogenous Measurement Model

$$\begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \\ x_6 \\ x_7 \\ x_8 \\ x_9 \\ x_{10} \\ x_{11} \\ x_{12} \\ x_{13} \\ x_{14} \\ x_{15} \\ x_{16} \\ x_{17} \\ x_{18} \\ x_{19} \end{bmatrix} = \begin{bmatrix} 1.0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{21} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{31} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{41} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{51} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{61} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{71} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{81} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{91} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{10,1} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \lambda_{11,1} & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1.0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1.0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1.0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 1.0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1.0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1.0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & \lambda_{18,7} & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1.0 \end{bmatrix} \begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \\ \xi_5 \\ \xi_6 \\ \xi_7 \\ \xi_8 \end{bmatrix} + \begin{bmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \\ \delta_5 \\ \delta_6 \\ \delta_7 \\ \delta_8 \\ \delta_9 \\ \delta_{10} \\ \delta_{11} \\ \delta_{12} \\ \delta_{13} \\ \delta_{14} \\ \delta_{15} \\ \delta_{16} \\ \delta_{17} \\ \delta_{18} \\ \delta_{19} \end{bmatrix}$$

$$\mathbf{x} = \Lambda_x \xi + \delta \qquad (5.2)$$

The second feature of the measurement models that merits comment concerns the issue of measurement reliability. In its present parameterization, the vectors for the errors in observed variables (the ε_I (endogenous) and δ_i (exogenous)) are free, not fixed. As these vectors represent the reliability of individual observed indicators of latent constructs, LISREL is being used to estimate reliability.

Future analyses, we believe, should fix reliability for individual observed indicators, i.e., not allow them to be estimated. Hayduk (1987, p. 119) is correct in noting that "The researcher's familiarity with the data collection procedures provides information about the measurement quality that is lost unless the researcher takes the initiative and incorporates this information by specifying particular measurement reliabilities." It is known, for example, that measures of respondent behaviors are more reliable than measures of respondent intentions. Subsequent analyses should capitalize on this knowledge. In the present, preliminary case, however, this refinement is not incorporated in the model.

Tables 14 and 15 present the endogenous and exogenous measurement model coefficients and their associated standard errors and t values (standard errors are immediately below the coefficient estimate in parentheses and the t value is below the standard error). All estimated coefficients are statistically significant. Among the coefficients estimated for youth attitude, none stand out as substantially different in magnitude leading to the conclusion that attitude is a cohesive and unidimensional construct as measured here.

The ksi1 vector in Table 15 presents coefficients associated with the youth attitudes latent construct. As their similarities in magnitude suggest, the construct is unidimensional. This construct is also highly reliable, with an estimated Cronbach's alpha of .92.

Table 14
Coefficients for Youth Army Endogenous Measurement Model

Λy	η1	η2
Y1	1.00	
ARMY	--	1.00

Table 15
Coefficients for Youth Army Exogenous Measurement Model

Λx	ξ1	ξ2	ξ3	ξ4	ξ5	ξ6	ξ7	ξ8
X1	1.00	--	--	--	--	--	--	--
X2	1.11 (0.03) 40.22	--	--	--	--	--	--	--
X3	1.22 (0.03) 47.25	--	--	--	--	--	--	--
X4	1.22 (0.03) 45.55	--	--	--	--	--	--	--
X5	1.18 (0.03) 44.03	--	--	--	--	--	--	--
X6	1.10 (0.03) 41.57	--	--	--	--	--	--	--
X7	1.29 (0.03) 45.12	--	--	--	--	--	--	--
X8	1.20 (0.03) 43.99	--	--	--	--	--	--	--

Table 15
Coefficients for Youth Army Exogenous Measurement Model (continued)

Λx	ξ1	ξ2	ξ3	ξ4	ξ5	ξ6	ξ7	ξ8
X9	1.32 (0.03) 46.15	--	--	--	--	--	--	--
X10	1.31 (0.03) 47.62	--	--	--	--	--	--	--
X11	1.21 (0.03) 43.51	--	--	--	--	--	--	--
X12	--	1.00	--	--	--	--	--	--
X13	--	--	1.00	--	--	--	--	--
X14	--	--	--	1.00	--	--	--	--
X15	--	--	--	--	1.00	--	--	--
X16	--	--	--	--	--	1.00	--	--
X17	--	--	--	--	--	--	1.00	--
X18	--	--	--	--	--	--	1.30 (0.11) 12.07	
X21	--	--	--	--	--	--	--	1.00

The label self-development best describes youth attitudes toward the Army. Also, while the attributes self-confidence, training, and development of potential prominate in the definition of youth attitudes, it is interesting to note that the attribute citing money for college was the least influential in defining youth attitudes. Despite the numerous Montgomery GI Bill advertising messages aired at the time of the ACOMS survey, this copy point was less influential than was self-development in defining youth Army attitudes.

Youth Army Structural Model. This section introduces the structural model adopted and estimated for the youth Army enlistment modeling effort. The model is introduced in matrix form; then the estimated model is presented. The matrix specification provides an overview of the structure of the

model. The presentation of estimated model coefficients (both standardized and unstandardized) allows the interpretation of findings.

The youth structural model is presented below in matrix form. Several features of this model merit comment as they bear on the interpretation of results. The structural model is a relatively straightforward, two-equation system. The model is recursive with all exogenous constructs directly influencing Army enlistment intentions. Army intentions, in turn, are specified as the only direct influence on enlistment behaviors; none of the exogenous concepts are specified as directly influencing enlistment behaviors. In this system no feedback loops or other features complicate the interpretation of estimated structural coefficients or the computation of indirect and total effects.

Matrix Specification - Youth Army Structural Model

$$\begin{bmatrix} \eta \\ \eta_{21} \end{bmatrix} = \begin{bmatrix} 0 & \beta_{12} \\ 0 & 0 \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \end{bmatrix} + \begin{bmatrix} 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ \gamma_{21} & \gamma_{22} & \gamma_{23} & \gamma_{24} & \gamma_{25} & \gamma_{26} & \gamma_{27} & \gamma_{28} \end{bmatrix} \begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \\ \xi_5 \\ \xi_6 \\ \xi_7 \\ \xi_8 \end{bmatrix} + \begin{bmatrix} \zeta_1 \\ \zeta_2 \\ \zeta_3 \\ \zeta_4 \\ \zeta_5 \\ \zeta_6 \\ \zeta_7 \\ \zeta_8 \end{bmatrix}$$

$$\eta = \beta\eta + \Gamma\xi + \zeta \quad (5.3)$$

Tables 16 and 17 present the standardized and unstandardized structural coefficients estimated for the youth model. Standardized coefficients are presented to facilitate comparisons of effect magnitudes among the variables included in the model. Unstandardized coefficients, based on the original metric of the observed variables, are useful for assessing the predicted effects of changes made in any variable on dependent variables. Coefficients in this model are interpreted in substantially the same manner as in multiple regression models. That is, standardized coefficients are interpreted as the expected magnitude of change (in standard deviation units) in the affected variable that would be expected given a one standard deviation change in the source variable, with all other variables left untouched at their original values. Unstandardized coefficients are similarly interpreted as the change expected given a one-unit change in the source variable, with all other variables left untouched at their original values.

In general, the estimated model provides very strong support for certain aspects of the Fishbein and Ajzen theory of reasoned action. Attitudes and social influence sources are both important predictors of enlistment intentions, and enlistment intentions strongly influence enlistment behaviors. In addition to relationships predicted by the Fishbein and Ajzen theory, the estimated coefficients show the considerable importance of college plans and behaviors for enlistment intentions. This finding, although expected given our understanding of the competing opportunities confronted by youth at this life stage, nonetheless provides a precise quantified measure of the effects of college intentions and behaviors upon enlistment intentions. This constitutes a significant extension of the Fishbein and Ajzen model and, more importantly, a refinement in understanding about the environment shaping enlistment intentions and behaviors.

Table 16
Youth Model Structural Coefficients (Standardized Solution)

β

	$\eta 1$ Application	$\eta 2$ Army Intentions
ETA 1 Application	--	0.48
ETA 2 Army Intentions	--	--

γ

	$\xi 1$ Attitude to Army	$\xi 2$ Work Intentions	$\xi 3$ College Intentions	$\xi 4$ Work Behaviors	$\xi 5$ Army Behaviors	$\xi 6$ College Behaviors	$\xi 7$ Parent Approval	$\xi 8$ Friend Approval
$\eta 1$ Application	--	--	--	--	--	--	--	--
$\eta 2$ Army Intentions	0.29	0.18	-0.40	-0.12	0.32	-0.58	0.44	0.28

Table 17
Youth Model Structural Coefficients (Unstandardized Solution)

β

	η1 Application	η2 Army Intentions
η1 Application	--	0.62 (0.05) -13.72
η2 Army Intentions	--	--

γ

	ξ1 Attitude to Army	ξ2 Work Intentions	ξ3 College Intentions	ξ4 Work Behaviors	ξ5 Army Behaviors	ξ6 College Behaviors	ξ7 Parent Approval	ξ8 Friend Approval
η1 Application	--	--	--	--	--	--	--	--
η2 Army Intentions	0.35 (0.02) 14.78	0.14 (0.02) 5.70	-0.31 (0.07) -4.76	-0.09 (0.03) -2.89	0.25 (0.03) 7.32	-0.45 (0.07) -6.50	0.52 (0.09) 6.00	0.22 (0.04) 6.11

Note: Cell entries are factor loadings, followed by standard errors in parentheses, and t-values.

As indicated above, the standardized structural coefficients can be examined to assess the relative influence of specific latent variables on enlistment intentions. In order of their relative influence, college behaviors, parental approval, and college intentions have the greatest effect on enlistment intentions. We have commented already that linkages to college intentions and behaviors constitute a significant extension of the Fishbein and Ajzen model. The influence of parental approval is also noteworthy. The strength of the relationship between the youth's perception of parental approval and enlistment intentions was not entirely expected. For both the standardized and unstandardized results, the effect of parental approval of enlistment on intentions (.44 and .52) is much stronger than that seen for the youth's own attitudes toward the Army (.29 and .35). This result has typically not been found in other empirical studies using the Fishbein and Ajzen theory where the effect of attitudes tend to be strongest. In the context of Army enlistment intentions, therefore, a fully specified model must include a social influence component.

Another finding of interest is the relatively weak influence of work intentions and behaviors upon Army enlistment intentions. This finding and its contrast with the findings for college is actually not unexpected given the generally accepted view within the recruiting community that interest in going to college competes with interest in enlistment, whereas youth who are seen as "work-bound" are generally more open, or at least neutral, with regard to military enlistment.

In the youth model of military behaviors, only one variable is hypothesized to influence enlistment behaviors directly. This variable is enlistment intentions and, indeed, it exhibits a very strong effect on enlistment behaviors. The standardized and unstandardized coefficients for the influence of Army enlistment intentions on enlistment behaviors are .48 and .62, respectively. These coefficients indicate that intentions is a strong predictor of behaviors in the context of military enlistment. This influence is not due to Army enlistment intentions alone, however. Some of the indicators used to predict intentions have strong indirect effects on enlistment behaviors. (Indirect effects are defined in the present nonrecursive model as the product of the path coefficient leading from a latent exogenous variable to enlistment intentions and the path coefficient leading from enlistment intentions to enlistment behaviors.) The youth's behaviors leading to college enrollment, parental approval, and college intentions have the greatest indirect effects with estimated standardized indirect effects of .28, .21, and .19, respectively. One standardized unit change in the latent variable parental approval, then, will result in an increase of .21 standardized units in enlistment behaviors. Although it is an accepted fact that intentions may lead to behaviors, additional information regarding a youth's plans, attitudes, and social influences prove very important in the enlistment context in actually predicting the linkage between intentions and behaviors.

Table 18 summarizes the predictive power of the structural models for intentions and behaviors in terms of the percentage of variance explained by each. The squared multiple correlations reported in this table demonstrate that the structural models are exceptionally successful in terms of explaining enlistment intentions and enlistment behaviors. Three-quarters of the variance in Army enlistment intentions is explained by the model and nearly one-quarter of the variance in enlistment behaviors is explained by enlistment intentions. These R^2s demonstrate a better predictive power than has been observed in the literature on enlistment intentions or behaviors. For example, Wilson and Perry (1988), using the Fishbein and Ajzen model and single equation regressions, reported a maximum R^2 of .46 for Army enlistment intentions.

This high degree of predictive ability points to the potential utility of such structural equation models in areas such as enlistment supply and military enlistment application prediction and forecasting. Current methods used for predicting enlistment supply rely exclusively on enlistment intentions

Table 18
Youth Army Enlistment Model: Squared Multiple Correlations for Structural Equations

Model	R^2
$\eta 1$ Enlistment Behaviors	0.23
$\eta 2$ Army Enlistment Intentions	0.75

measures (Asch and Orvis, 1994) but do not explicitly model these measures. Other attempts at modeling enlistment intentions using demographic characteristics alone (Bray, et al., 1990) have yielded very modest predictive capabilities. The development of a contemporary and comprehensive model linking youth attitudes, life-stage activities, social influences, and enlistment behaviors has the potential of greatly increasing the precision of enlistment supply forecasts.

Linked Youth and Parent Model of Army Enlistment

The final model estimated using responses gathered from both youth and their parents proved to be remarkable in several respects. Chief among these are the remarkable predictive power of the model and the departures this model makes from the original conceptual model.

Figure 7 presents the final estimated structural equation model of Army enlistment based on the linked youth and parent data. (Concise definitions of model components contained in this figure are provided in Chapter 3 and Appendix C.) Several features of this model are worthy of note. First, this model represents a significant departure from the parental portion of the conceptual model as presented in Figure 1. Specifically, the conceptual model posited a logical sequence of influences on youth Army enlistment intentions that proceeded from parent's attitudes toward the Army, through parental preferences for their son's future, to parental communications with youth regarding enlistment. Second, parental communications were expected to directly influence youth subjective norms regarding Army enlistment, rather than directly influence enlistment behaviors as shown in Figure 7. (To simplify this figure, error terms for parental and endogenous measured variables have been omitted.)

Modifications to the initial conceptual model were made based on results of initial model estimation and evaluation. Parental preferences failed to demonstrate significant linkages with any portion of the model. This is presumed an artifact of poor measurement. Review of the survey data suggests the responses to the survey question was highly skewed in favor of college enrollment. The second major departure from the conceptual model presented in Figure 1 is the direct linkage between parental communications and enlistment behaviors.. Extensive evaluation of competing specifications led to the conclusion that the correct line of influence of parental communication was to specific behaviors (visiting the MEPS in this model), not intentions.

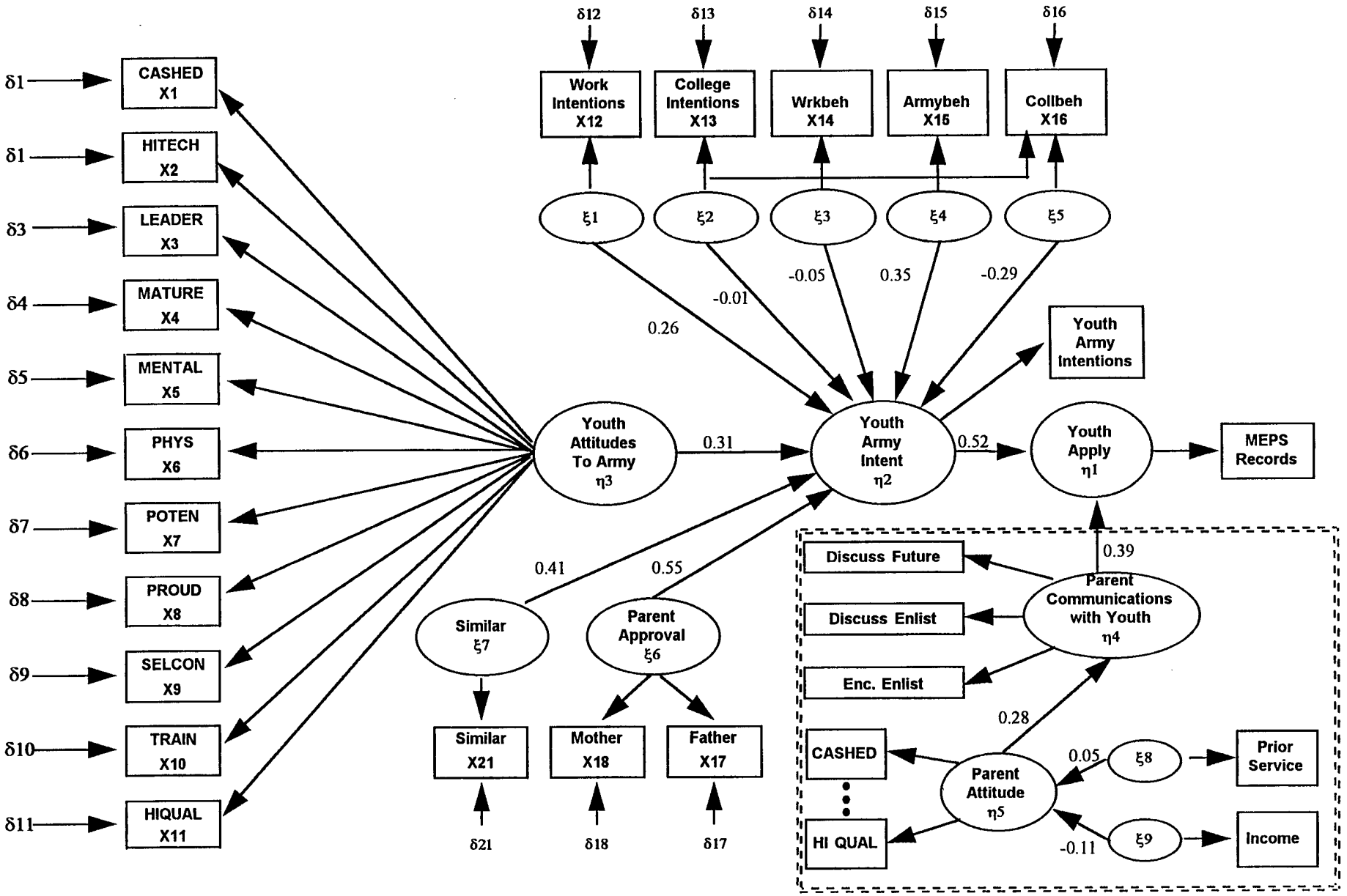

Figure 7. Final ACOMS linked parent-youth Army enlistment model.

The final comment to be made at this point in discussing the linked ACOMS youth and parent model concerns the youth portion of the model. The youth model remains substantially as identified in modeling the youth-only ACOMS data. A complication linking college intentions to behaviors leading to college is introduced but, other than this subtlety, the youth model remains as previously presented.

The linked youth and parental model of Army enlistment intentions and behaviors, then, posits a youth model as presented previously, with the change noted. Parental influence proceeds from exogenous factors, such as income and prior military service, to parental attitudes formed about the Army; to communication with the son about enlistment, to enlistment behaviors. It appears that the parental influence process does not entirely conform to the social influence model of Fishbein and Ajzen.

Linked youth and parent Army enlistment measurement models. This section introduces the measurement models adopted and estimated for the linked youth and parent Army enlistment modeling effort. The models are first presented as matrix equations; then the estimated models are presented. The matrix specification of the models provides an overview of the structure of the models and highlights some salient model features. Presentation of the estimated models provides indications of model adequacy.

The matrix specification for the linked youth and parent exogenous and endogenous measurement models are presented below. As in the youth only model, a number of coefficients in the Λ_x and Λ_y matrices have been set equal to one. Also, as in the youth model, the vectors for the errors in observed variables (the ε_I (endogenous) and δ_i (exogenous)) are free, not fixed. Consequently, LISREL is being used to estimate reliability. Future analyses should fix reliability for individual observed indicators.

Matrix Specification - Linked Youth and Parent Army Exogenous Measurement Model

$$\begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \\ x_6 \\ x_7 \\ x_8 \\ x_9 \\ x_{10} \end{bmatrix} = \begin{bmatrix} 1.0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 1.0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1.0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 1.0 & 0 & 0 & 0 & 0 & 0 \\ 0 & \lambda_{52} & 0 & 0 & 1.0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 1.0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & \lambda_{16} & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 1.0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1.0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 1.0 \end{bmatrix} \begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \\ \xi_4 \\ \xi_5 \\ \xi_6 \\ \xi_7 \\ \xi_8 \\ \xi_9 \end{bmatrix} + \begin{bmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \\ \delta_5 \\ \delta_6 \\ \delta_7 \\ \delta_8 \\ \delta_9 \\ \delta_{10} \end{bmatrix}$$

$$\mathbf{x} = \Lambda_x \xi + \delta \qquad (5.4)$$

Matrix Specification - Linked Youth and Parent Army Endogenous Measurement Model

$$\begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ y_4 \\ y_5 \\ y_6 \\ y_7 \\ y_8 \\ y_9 \\ y_{10} \\ y_{11} \\ y_{12} \\ y_{13} \\ y_{14} \\ y_{15} \\ y_{16} \\ y_{17} \\ y_{18} \\ y_{19} \\ y_{20} \\ y_{21} \\ y_{22} \\ y_{23} \\ y_{24} \\ y_{25} \\ y_{26} \\ y_{27} \end{bmatrix} = \begin{bmatrix} 1.0 & 0 & 0 & 0 & 0 \\ 0 & 1.0 & 0 & 0 & 0 \\ 0 & 0 & 1.0 & 0 & 0 \\ 0 & 0 & \lambda_{43} & 0 & 0 \\ 0 & 0 & \lambda_{53} & 0 & 0 \\ 0 & 0 & \lambda_{63} & 0 & 0 \\ 0 & 0 & \lambda_{73} & 0 & 0 \\ 0 & 0 & \lambda_{83} & 0 & 0 \\ 0 & 0 & \lambda_{93} & 0 & 0 \\ 0 & 0 & \lambda_{10,3} & 0 & 0 \\ 0 & 0 & \lambda_{11,3} & 0 & 0 \\ 0 & 0 & \lambda_{12,3} & 0 & 0 \\ 0 & 0 & \lambda_{13,3} & 0 & 0 \\ 0 & 0 & 0 & 1.0 & 0 \\ 0 & 0 & 0 & \lambda_{15,4} & 0 \\ 0 & 0 & 0 & \lambda_{16,4} & 0 \\ 0 & 0 & 0 & 0 & 1.0 \\ 0 & 0 & 0 & 0 & \lambda_{18,5} \\ 0 & 0 & 0 & 0 & \lambda_{19,5} \\ 0 & 0 & 0 & 0 & \lambda_{20,5} \\ 0 & 0 & 0 & 0 & \lambda_{21,5} \\ 0 & 0 & 0 & 0 & \lambda_{22,5} \\ 0 & 0 & 0 & 0 & \lambda_{23,5} \\ 0 & 0 & 0 & 0 & \lambda_{24,5} \\ 0 & 0 & 0 & 0 & \lambda_{25,5} \\ 0 & 0 & 0 & 0 & \lambda_{26,5} \\ 0 & 0 & 0 & 0 & \lambda_{27,5} \end{bmatrix} \begin{bmatrix} \eta_1 \\ \eta_2 \\ \eta_3 \\ \eta_4 \\ \eta_5 \end{bmatrix} + \begin{bmatrix} \epsilon_1 \\ \epsilon_2 \\ \epsilon_3 \\ \epsilon_4 \\ \epsilon_5 \\ \epsilon_6 \\ \epsilon_7 \\ \epsilon_8 \\ \epsilon_9 \\ \epsilon_{10} \\ \epsilon_{11} \\ \epsilon_{12} \\ \epsilon_{13} \\ \epsilon_{14} \\ \epsilon_{15} \\ \epsilon_{16} \\ \epsilon_{17} \\ \epsilon_{18} \\ \epsilon_{19} \\ \epsilon_{20} \\ \epsilon_{21} \\ \epsilon_{22} \\ \epsilon_{23} \\ \epsilon_{24} \\ \epsilon_{25} \\ \epsilon_{26} \\ \epsilon_{27} \end{bmatrix}$$

$$\mathbf{y} = \Lambda_y \eta + \varepsilon \qquad (5.5)$$

Tables 19 and 20 present the endogenous and exogenous measurement model coefficients and their associated standard errors and *t* values (standard errors are immediately below the coefficient estimate in parentheses and the *t* value is below the standard error). All estimated coefficients are statistically significant. Among the coefficients estimated for youth and parent attitudes, none stand

Table 19
Structural Coefficients for Linked Youth and Parent Army Endogenous Measurement Model

LAMBDA-Y	ETA 1	ETA 2	ETA 3	ETA 4	ETA 5
Y1	1.00	--	--	--	--
ARMY	--	1.00	--	--	--
X1	--	--	1.00	--	--
X2	--	--	1.19 (0.02) 50.22	--	--
X3	--	--	1.26 (0.02) 56.56	--	--
X4	--	--	1.23 (0.02) 55.08	--	--
X5	--	--	1.25 (0.02) 52.87	--	--

Table 19
Structural Coefficients for Linked Youth and Parent Army Endogenous Measurement Model (continued)

	ETA 1	ETA 2	ETA 3	ETA 4	ETA 5
X6	--	--	1.14 (0.02) 51.14	--	--
X7	--	--	-1.35 (0.02) 56.75	--	--
X8	--	--	1.15 (0.02) 52.49	--	--
X9	--	--	-1.35 (0.02) 55.85	--	--
X10	--	--	-1.32 (0.02) 57.29	--	--
X11	--	--	1.26 (0.02) 52.78	--	--
PX17	--	--	--	1.00	--

Table 19
Structural Coefficients for Linked Youth and Parent Army Endogenous Measurement Model (continued)

	ETA 1	ETA 2	ETA 3	ETA 4	ETA 5
PX21	--	--	--	3.81 (0.28) 13.74	--
PX20	--	--	--	2.31 (0.17) 13.53	--
PX1	--	--	--	--	1.00
PX2	--	--	--	--	1.15 (0.02) 70.86
PX3	--	--	--	--	1.22 (0.02) 74.69
PX4	--	--	--	--	1.21 (0.02) 72.18
PX5	--	--	--	--	1.20 (0.02) 72.28

Table 19
Structural Coefficients for Linked Youth and Parent Army Endogenous Measurement Model (continued)

	ETA 1	ETA 2	ETA 3	ETA 4	ETA 5
PX6	--	--	--	--	1.11 (0.02) 62.75
PX7	--	--	--	--	-1.23 (0.02) 76.08
PX8	--	--	--	--	1.17 (0.02) 76.57
PX9	--	--	--	--	-1.23 (0.02) 74.72
PX10	--	--	--	--	1.21 (0.02) 74.94
PX11	--	--	--	--	-1.23 (0.02) 73.90

Table 20
Structural Coefficients for Linked Youth and Parent Army Exogenous Measurement Model

LAMBDA-X	KSI 1	KSI 2	KSI 3	KSI 4	KSI 5	KSI 6	KSI 7	KSI 8	KSI 9
X12	1.00	--	--	--	--	--	--	--	--
X13	--	1.00	--	--	--	--	--	--	--
X14	--	--	1.00	--	--	--	--	--	--
X15	--	--	--	1.00	--	--	--	--	--
X16	--	-0.73 (0.03) -26.19	--	--	1.00	--	--	--	--
X17	--	--	--	--	--	1.00	--	--	--
X18	--	--	--	--	--	1.10 (0.04) 25.98	--	--	--
X21	--	--	--	--	--	--	1.00	--	--
PX14	--	--	--	--	--	--	--	1.00	--
PX12	--	--	--	--	--	--	--	--	1.00

out as substantially different in magnitude, leading to the conclusion that the construct attitude for youth and their parents is a cohesive and unidimensional factor as measured here.

The eta3 and eta5 vectors in Table 19 present coefficients for the youth and parent attitude constructs, respectively. As the similarity in coefficient magnitudes suggest, the attitude structures for youth and parents are unidimensional. Additionally, these attitude structures are best described as defined primarily by self-development/training attributes. Training, self-confidence, working in a high tech environment, and the development of potential are among the attributes most strongly defining attitudes for youth and parents. Each scale proved acceptable, with Cronbach's alphas of .92 and .95 for the youth and parent scales, respectively.

Two comments should be made regarding the structure and measurement of youth and parent attitudes. First, it is instructive to note that the least defining attitude attribute for both youth and parents was money for education/college. In spite of heavy advertising of the Montgomery GI Bill at the time of the ACOMS survey administration, money for education was the least defining attitude attribute. In this regard, both parents and youth viewed the Army essentially through the same lens. Second, the unidimensionality of attitudes, while not particularly surprising, may point to ways to improve measurement. The attributes used for assessing attitudes were Army advertising copy points. It makes sense, therefore, that each was evaluated relatively the same by respondents. Each attribute described a positive aspect of the Army and what it offered recruite, so uniform responses, whether positive or negative, are reasonable. This observation leads to a suggestion that future measures of attitudes toward the Army include negative, as well as positive, attributes. Including negative attributes, such as extended separation from family and exposure to harm's way, might measure other dimensions of attitudes toward the Army and so refine the measure of this concept.

Linked Youth and Parent Army Structural Model. This section introduces the structural model adopted and estimated for the linked youth and parent Army enlistment modeling effort. The model is first presented in matrix form; then the estimated model is presented. The matrix specification provides an overview of the structure of the model. The presentation of estimated model coefficients (both standardized and unstandardized) allows the interpretation of findings.

The linked youth and parent structural model is presented below in matrix form. In the discussion above on the youth models, the role of fixed 1.0's and free error vectors were presented and the same conventions were followed for the linked model. The youth and parent structural model, however, does contain an additional feature that requires comment. According to conventional definitions, youth attitude (η_3) is not an endogenous variable as presented in the model. The parameterization presented here (youth attitude as an endogenous concept) is one of convenience. Much of the initial modeling effort treated youth attitude as endogenous with a variety of linkages to exogenous indicators. In the course of model estimation and evaluation, none of the exogenous linkages with youth attitude proved acceptable and so none appear in the final model.

Matrix Specification - Linked Youth and Parent Army Structural Model

$$\begin{bmatrix}\eta_1\\ \eta_2\\ \eta_3\\ \eta_4\\ \eta_5\end{bmatrix} = \begin{bmatrix}0 & \beta_{12} & 0 & \beta_{14} & 0\\ 0 & 0 & \beta_{23} & 0 & 0\\ 0 & 0 & 0 & 0 & 0\\ 0 & 0 & 0 & 0 & \beta_{45}\\ 0 & 0 & 0 & 0 & 0\end{bmatrix} \begin{bmatrix}\eta_1\\ \eta_2\\ \eta_3\\ \eta_4\\ \eta_5\end{bmatrix} + \begin{bmatrix}0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0\\ \gamma_{21} & \gamma_{22} & \gamma_{23} & \gamma_{24} & \gamma_{25} & \gamma_{26} & \gamma_{27} & 0 & 0\\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0\\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & \gamma_{58} & \gamma_{59}\end{bmatrix} \begin{bmatrix}\xi_1\\ \xi_2\\ \xi_3\\ \xi_4\\ \xi_5\\ \xi_6\\ \xi_7\\ \xi_8\\ \xi_9\end{bmatrix} + \begin{bmatrix}\zeta_1\\ \zeta_2\\ \zeta_3\\ \zeta_4\\ \zeta_5\\ \zeta_6\\ \zeta_7\\ \zeta_8\\ \zeta_9\end{bmatrix}$$

$$\eta = \beta\eta + \Gamma\xi + \zeta \quad (5.6)$$

Our particular specification, although unconventional, produces exactly the same parameter estimates that would be produced had youth attitude been treated as exogenous. Indeed, Hayduk (1987, pp.209-212) illustrates this technique as a way to simplify certain types of models. In his discussion, Hayduk "...shows how we can respecify the basic smoking model to avoid using any ξ variables ... [with the result that] the new η variables display the same pattern of effects on η_1 η_2 and η_3 as did the original ξ variables." (Hayduk, 1987, p. 209)

Tables 21 and 22 present both the standardized and unstandardized structural coefficients estimated for the exogenous and endogenous indicators included in the model. Considering the youth portion of the model first, the influence of Army enlistment intentions remains a strong influence on enlistment behaviors with standardized and unstandardized coefficients of .52 and .84, respectively. In the modeling of influences on Army enlistment intentions, however, there are some changes observed from the youth only model.

First, the relationships among the latent indicators of college behaviors and intentions have become more complex. Evaluation of model results pointed to the need for a linkage between the observed indicator of college behaviors with the latent construct for college intentions. There is an obvious interrelationship among college indicators but the linkage to Army enlistment intentions is now restricted only to an influence from college behaviors. College intentions in the linked model do not materially affect Army enlistment intentions (standardized coefficient of .01), while college behaviors remain an important influence on Army enlistment intentions (standardized coefficient of .29).

As previously observed for the youth model, the influence of parental approval remains among the strongest direct influences on Army enlistment intentions. In fact, in the linked model, parental approval exerts the strongest influence on intentions (standardized coefficient of .55). Also, as discussed for the youth only model, youth attitude and Army behaviors remain important influences on Army enlistment intentions, while work intentions and behaviors contribute substantially less to the explanation of Army enlistment intentions.

Table 21
Linked Youth and Parent Model: Structural Coefficients (Standardized Solution)

β

	η1 Application	η2 Army Intentions	η3 Youth Attitude	η4 Youth-Parent Communication	η5 Parent Attitude
η1 Application	--	0.52	--	0.39	--
η2 Army Intentions	--	--	0.31	--	--
η3 Youth Attitude	--	--	--	--	--
η4 Youth-Parent Communication	--	--	--	--	0.28
η5 Parent Attitude	--	--	--	--	--

γ

	ξ1 Work Intentions	ξ2 College Intentions	ξ3 Work Behaviors	ξ4 Army Behaviors	ξ5 College Behaviors	ξ6 Parent Approval	ξ7 Similar People	ξ8 Prior Service	ξ9 Income
η1 Application	--	--	--	--	--	--	--	--	--
η2 Army Intentions	0.26	-0.01	-0.05	0.35	-0.29	0.55	0.41	--	--
η3 Youth Attitude	--	--	--	--	--	--	--	--	--
η4 Youth-Parent Communication	--	--	--	--	--	--	--	--	--
η5 Parent Attitude	--	--	--	--	--	--	--	0.05	-0.11

Table 22
Linked Youth and Parent Model: Structural Coefficients (Unstandardized Solution)

$\underline{\beta}$

	$\eta\underline{1}$ Application	$\eta\underline{2}$ Army Intentions	$\eta\underline{3}$ Youth Attitude	$\eta\underline{4}$ Youth-Parent Communication	$\eta\underline{5}$ Parent Attitude
$\eta 1$ Application	--	0.84 (0.04) 21.41	--	1.66 (0.12) 13.80	--
$\eta 2$ Army Intentions	--	--	0.30 (0.02) 18.91	--	--
$\eta 3$ Youth Attitude	--	--	--	--	--
$\eta 4$ Youth-Parent Communication	--	--	--	--	0.09 (0.01) 11.78
$\eta 5$ Parent Attitude	--	--	--	--	--

Note: Cell entries are factor loadings, followed by standard errors in parentheses, and t-values.

Table 22
Linked Youth and Parent Model Structural Coefficients (Unstandardized Solution) (continued)

γ	ξ_1 Work Intentions	ξ_2 College Intentions	ξ_3 Work Behaviors	ξ_4 Army Behaviors	ξ_5 College Behaviors	ξ_6 Parent Approval	ξ_7 Similar People	ξ_8 Prior Service	ξ_9 Income
η_1 Application	--	--	--	--	--	--	--	--	--
η_2 Army Intentions	0.16 (0.01) 16.23	0.00 (0.01) 0.50	-0.03 (0.01) -2.29	0.22 (0.01) 15.99	-0.26 (0.03) -8.23	0.51 (0.04 -14.2	0.26 (0.01)) 17.919	--	--
η_3 Youth Attitude	--	--	--	--	--	--	--	--	--
η_4 Youth-Parent Communication	--	--	--	--	--	--	--	--	--
η_5 Parent Attitude	--	--	--	--	--	--	--	0.04 (0.01) 6.37	-0.08 (0.02) -4.40

While the influences of youth attitudes, behaviors, and social context have remained relatively constant and our understanding of the effects of college behaviors has sharpened, the inclusion of parental survey data has had a tremendous effect on the modeling of enlistment behaviors. In fact, the largest direct effects on enlistment behaviors come from youth Army enlistment intentions and parental communications.

The indirect effects of exogenous latent variables on Army enlistment intentions and enlistment behaviors reinforces findings presented earlier for the youth-only model, but does not extend our understanding of parental influence beyond that noted for parental communication. Of the latent exogenous variables, parental approval has the largest indirect effect on youth enlistment behaviors (.29, standardized). Perceptions that similar people are entering the military and enlistment-related behaviors have the second and third strongest indirect effects with standardized effects of .21 and .18, respectively. College behaviors and work intentions have a somewhat smaller indirect effect on enlistment behaviors. None of the remaining exogenous indicators, including those for the parental model, have an appreciable effect on enlistment behaviors.

In summary, the linking of youth and parental survey responses has yielded a great increase in the predictive ability of the model with respect to enlistment behaviors. The linked model has also refined our understanding of the relationship between college intentions and behaviors leading to college, and between those behaviors and Army enlistment intentions. In the present model it appears that it is college enrollment behaviors, not merely college intentions, that affect enlistment intentions. Finally, the relatively poor relationships among the parental indicators in the model point to the need for more analysis into the interrelations among parental attitudes, opinions, and communications with their sons. The Fishbein and Ajzen model does not appear to adequately characterize these relationships, although it does, correctly, identify a need to include parental (social) factors in a model linking youth attitude, intentions, and behaviors.

Table 23 summarizes explanatory power of the linked youth and parent models. This table dramatically underscores two findings. First, inclusion of parental survey responses significantly increases the predictive power of the models. The percentage of variance explained for military enlistment behaviors increases from 23% for the youth model to 43% for the linked youth-parent model and the respective percentage for Army enlistment intentions increases from 75% to 84%. Clearly, parental communication is very important in explaining and predicting the enlistment behaviors of youth.

A second major finding is that within the parental portion of the model, the linkages among concepts are not strong. The predictive power of parental model components (parental attitudes, parental status, and parental communication) generally is weak. Only 1% of the variation in attitudes is explained by the parental characteristics prior military service and income. Parental communication is better modeled by the structural specifications as 8% of its variance is explained by parental attitudes.

Assessing Model Fit

This final section presents several model evaluation statistics used specifically for the assessment of structural equation model fit. Tables 24 and 25 present selected goodness of fit measures for both the youth and the linked youth and parent models. Three measures of fit are presented, χ^2 , the root mean squared error residual (RMR), and the goodness of fit index (GFI). The information contained in these tables should be viewed comparatively. That is, the relative fit of each model should be viewed in terms of the other.

Table 23
Linked Youth and ParentModel: Squared Multiple Correlations for Structural Equations

Model	R^2
$\eta 1$ Application	0.43
$\eta 2$ Army Intentions	0.84
$\eta 3$ Youth Attitudes to Army	--
$\eta 4$ Parent Communications with Youth	0.08
$\eta 5$ Parent Attitudes	0.01

Table 24
Youth Army Enlistment Model: Goodness of Fit Statistics

Statistic	Value
χ^2 with 185 Degrees Of Freedom (P = 0.0)	1222.86
Root Mean Square Residual (RMR)	0.10
Goodness Of Fit Index (GFI)	0.96

Table 25
Linked Youth and Parent Army Enlistment Model: Goodness of Fit Statistics

Statistic	Value
χ^2 with 624 Degrees Of Freedom (P = 0.0)	6401.44
Root Mean Square Residual (RMR)	0.12
Goodness Of Fit Index (GFI)	0.93

The $\chi 2$ measure is a frequently used measure of goodness-of-fit. In the present context it is a likelihood ratio statistic testing the estimated model's estimation of the observed covariance matrix against that that would be obtained by a totally unconstrained model. The $\chi 2$ is sensitive to sample size. As sample size increases, the chances of rejecting a model's fit increases. In the present case, a sample size over 2,000 nearly assures model rejection so $\chi 2$ should be used as a comparison of the

relative fit of the two models. Obviously, the youth model, with a $\chi 2$ of 1,223, better reproduces observed covariances than the linked model that has a $\chi 2$ of 6,401. This is consistent with the earlier observation that specification of parental linkages do not conform to the Fishbein and Ajzen model and are less well understood. Also contributing to the increased $\chi 2$ for the linked model is the increased size of the covariance matrix it must recreate. The linked model covariance matrix has 37 rows and columns, while the youth model covariance matrix has only 21 rows and columns.

Both models, however, merit consideration as they prove adequate in additional goodness-of-fit measures. The goodness-of-fit index (GFI) indicates the relative amount of variances and covariances jointly accounted for by the hypothesized model. The GFI ranges between 0 and 1 with higher values indicating better fit. It is a generally accepted rule-of-thumb that values equal to or greater than .9 indicate that a model adequately fits the data. The youth model value of .96 and the linked model value of .93 both meet conventional standards of fit. Finally, the root mean square residual (RMR) value indicates adequate fit. The RMR indicates the average deviation between the observed and fitted

covariance matrices and so is used to compare the fit of competing models. In comparing the youth and linked models, the lower value of the RMR is realized by the youth model indicating a better fit for this model. The RMR values for both models are less than .2, though, suggesting acceptable fit for an initial modeling effort.

6. Summary and Conclusions

This study explored the utility of the Fishbein and Ajzen theory of reasoned action to the military enlistment context. Survey data collected from youth and their parents were used in conjunction with military personnel records to develop several empirical models of enlistment intention and behaviors. The models were developed in several stages, starting from a conceptual model that applied the Fishbein and Ajzen concepts to enlistment intentions and behaviors, through an exploratory analysis of the variables available in the ACOMS survey instrument, to a model building effort that employed structural covariance modeling techniques.

Four empirical models were developed on Army and military enlistment: A youth model of Army enlistment, a linked youth and parent model of Army enlistment, a youth model of military enlistment, and a combined youth and parent model of military enlistment. The models of Army enlistment and military enlistment are essentially identical, with some very minor differences. In general, these models provide strong support for the general framework presented by the theory of reasoned action and for the survey measures that had been developed for ACOMS to measure the variables suggested by the theory. That is, as suggested by the theory, youth attitudes are very strongly predictive of youth enlistment intentions and behaviors. This finding supports earlier descriptive analyses conducted on ACOMS data (Nieva, et al., 1988).

In addition, there was very strong support for the role of social influence, in particular parental influence, in the enlistment process. Although unique in the enlistment research arena, as well as in the body of research built on the Fishbein and Ajzen theory, this demonstration of the importance of parental influence on youth intentions and behaviors has long been part of practical recruiter "lore" and practice.

It should be noted that our empirical results to date are much stronger for the youth models than they are for the linked youth and parental model. There are several potential reasons for the relative weakness of the linked model. As discussed earlier in Chapter 5, the analyses on parental attitudes toward the Army suggest that the structure of parental attitudes may not be as simple as the unidimensional structure of youth attitudes toward the Army. It is also possible that the attitude structure may differ for fathers and mothers. The linked youth and parent model appears to introduce unexpected relationships between parents and their sons' enlistment behaviors. Although the youth responses in both the youth and linked models provide strong support for the social influence aspects of the Fishbein and Ajzen theory, the parental responses seem to suggest an additional dynamic by which parents affect enlistment behaviors. All these beg for further analyses.

Our models also showed strong predictive relationships between measures of enlistment intentions and actual enlistment behaviors, that is, application to the military at the MEPS. Using slightly different measures of enlistment intentions, our findings confirm the validity of the basic enlistment propensity measures, as first demonstrated by Orvis, in an analysis of survey and records data collected in the early 1980s (Orvis, et al., 1992). Further discussion of these general issues follows.

The Role of Parental Influence

The availability of linked youth and parent respondents is a unique and powerful feature of the ACOMS data set. In YATS and other enlistment-related surveys of youth, youth have been asked to

report about their parents' views, such as their support of enlistment and their attitudes about the military. This indirect view into the parental perspectives provides some useful insights into the enlistment process, but clearly provides opportunities for filtering and distortion by the youth. A study conducted by Orkand (1983) queried parents about their enlistment-related views. This kind of study provides good data on factors such as parental opinions about the military, but provides no means of assessing to what extent these parental viewpoints affect the young people's decision-making process.

Our analyses show that parents are, indeed, important actors in their children's planning for the future. Young men's perceptions of parental support for their joining the military were highly predictive of their enlistment intentions, providing very strong empirical support for the social influence aspects of the Fishbein and Ajzen theory. In fact, parental support was almost twice as powerful a factor in affecting enlistment intentions as the young men's attitudes toward the Army.

Results of the linked youth and parental models suggest other roles that parents play in the enlistment decision process. Although we started with a conceptual model that linked parental variables to the youth's subjective norms, our analyses did not support this conceptualization. Our results suggest that parents did not influence their sons' perceptions about parental support for their enlistment intentions, nor their sons' attitudes toward the Army (alternative links that were explored in the modeling effort). Rather, the linked youth and parent model developed suggests that parents influence enlistment behaviors directly, without necessarily influencing their sons' subjective norms nor enlistment intentions. Our results also indicate that the link between parental communications and enlistment behaviors adds substantially to the variance explained in enlistment behaviors.

This latter path is of particular interest, as it suggests a different dynamic occurring outside of the attitudinal framework underlying the theory of reasoned action. Explaining the nature of this effect has to be speculative, at this point. This path may indicate parental pressure for the youth to enlist, without regard to youth interest. It may also indicate a facilitative or enabling role wherein parental communications with their sons include providing other pragmatic supports in their sons' application to the military. It will be important to understand this phenomenon better, as it may open up new possibilities for the recruiting process.

Understanding Enlistment and Other Intentions

One of the most striking features of our models is the extent -- over 80% -- to which the enlistment intention can be explained by the variables included in the analysis. This extent of explanatory power in a model is highly unusual in the social sciences, where it is much more usual to be able to explain about 20 to 30% of the variance in the dependent variables of interest.

In examining the various factors examined in the model, several conclusions can be reached. In the previous section, we pointed out that the normative aspect of the theory of reasoned action was even more important than personal factors in determining enlistment intentions. Perceived parental support appears to be a very strong factor affecting enlistment intentions. The role of peers cannot be ignored either. A young man's perception that people like himself are enlisting is an important factor in his own intention to enlist in the military.

As predicted by the theory, the young men's attitudes toward the Army is an important determinant of their intentions to enlist. Thus, our model provides support for the core hypothesis of the Fishbein and Ajzen theory. It is particularly interesting that the structure of overall attitudes toward

the Army, while essentially unidimensional, is dominated by self-development themes (e.g., providing self confidence, developing self-potential), and gives least weight to the opportunity to earn money for college or vocational school. It should be noted that these findings represent those of young white men in the latter part of the 1980s. Whether this structure holds predominantly for all subgroups of youth is a matter for further investigation. It is likely that there is a small, but critical, segment of the youth population for whom the Army offer of money for college or other forms of schooling may form the core of their attitude toward the Army.

The models also consider the impact of "competing futures" on enlistment intentions. Our findings confirm the Army's belief in the dual market theory, that is, that the youth recruiting market is essentially divided into college and work bound youth. In line with the dual market concepts, our models show that youth interested in college or who have taken intermediate steps preparatory to college enrollment tend to be disinclined to enlist. Furthermore, those young men who report a high likelihood of working in a civilian job in the near future tend to be more likely to also be interested in enlisting. However, the positive relationships between work intentions or behavior and enlistment intentions are much weaker than the negative relationships between intentions to go to college and enlistment intentions.

Our results suggest that greater understanding of enlistment intentions may be obtained by closer consideration of the interrelationships, both competing and supporting, among enlistment, college, and work intentions. Given today's increasingly complex world, young people are often in the position of combining various permutations of college, work, and perhaps the military. It may be more realistic to model all three intentions together, or to create measures of youth intentions for the future that integrate these various intentions.

Predicting Enlistment Behaviors

Ultimately, the value of any intention measure is the extent to which it is able to predict the relevant behavior accurately. In our model, we tested the relationship between enlistment intentions, using self reported measures that were based on the YATS enlistment propensity measure, and enlistment behaviors, as represented by visiting the MEPS. This part of the modeling effort confirms earlier findings of the predictive validity of enlistment propensity (Orvis, et al., 1982). In our models, young men's reports of their likelihood of enlisting in the military proved to be good predictors of their eventual application to the military.

A potentially important result of our analyses comes from the predictions of enlistment behaviors obtained in the linked youth and parent models. Addition of the parental data to the youth responses substantially increased the predictability of enlistment behaviors. As pointed out earlier in this chapter, the mechanism by which this occurs is still unclear. There is still much refinement required in the linked model, both in terms of the measurement of parental attitudes and in clarifying the structural relationships among the variables. However, the magnitude of the effects of the parental variables on their sons' enlistment behaviors suggests that there is something important to uncover with further work.

Understanding of youth enlistment behaviors would also be enhanced by examination of subgroups who may have different experiences from those reported here. Our analytic sample is confined to current students or high school graduates, and excludes those who have dropped out of high school. Like the national population, our analytic sample is largely white with the vast majority of

parents having at least a high-school diploma. Whether our findings would hold for other racial or ethnic groups, or for families with different circumstances, remains an empirical question.

One specific group for further analytic focus consists of those young men who fall in the "false negative" group. Although they express no interest in enlistment, they actually do enlist. Although there is a smaller proportion of the "negative propensity" group who do enlist, compared to the "positive propensity" group, the sheer number of youth who express no interest in the military means that these "false negatives" constitute the majority of youth who eventually enlist. There is relatively little known about this group. Qualitative interviews with youth and recruiters (Perry, Griffith, and Korotkin, 1991; Lerro, Batley, Tagliareni, and Sellman, 1991) provide some indications that some of these "false negatives" may be youth for whom the theory of reasoned action may not apply. For some of these young men, enlistment appeared to be an escape from unattractive home situations; for others, the military option appeared to provide solutions to an unexpected life problem. Again, these conjectures suggest possible avenues for further investigation.

Practical Implications of Results to Date

Our findings on the role of social influence on young men's enlistment intentions and behaviors form the cornerstone for the practical recommendations that can be made from this study. Our results highlight the key roles that parents play during this critical phase of their sons' lives. Many Army recruiters already understand this. However, these results can serve as reinforcement to the parental focus in recruiter training and practice. Given the amplifying effects of parental factors on the enlistment process, the importance of recruiters making and keeping contact with parents of potential recruits cannot be overemphasized.

It is also significant that youth perceptions about the opinion of their parents and friends on enlistment are so highly related to their intentions to enlist in the Army. This suggests that recruiters need to emphasize the social desirability of the enlistment option to the young men they contact, or conversely, to counter the predictable, but perhaps often unstated, worries that young men may have regarding the negative social norms around joining the military.

The lessons for Army recruiters apply as well to Army advertisers. Young men need to hear media messages that parents are supportive of their sons joining the Armed Forces. They also need to feel that the young people joining the Army are not strange and different from themselves. The Army may benefit from giving more air time to advertisements that already carry these themes, as well as developing new communications with these images and messages. Finally, communications should be developed that address the parents of potential recruits. These messages should encourage parents to be actively discussing future options with their sons, with particular emphasis on the possibility of joining the military.

Implications for Future Surveys of Enlistment

The results of these analyses suggest a number of implications for the design of future surveys of the career and educational plans of youth. These suggestions include refinements of current measures, additions of new concepts, and deletions.

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Implications for Future Surveys of Enlistment

The results of these analyses suggest a number of implications for the design of future surveys of the career and educational plans of youth. These suggestions include refinements of current measures, additions of new concepts, and deletions.

These analyses support the utility of an attitudinal framework in predicting enlistment intentions. However, the linkages between youth attitudes toward the Army, as measured in this study, and enlistment intentions were weaker than the young men's perceptions about parental support of enlistment. The measure of attitudes was based on a series of positive attributes that served as the copy points in the Army's advertising program in the late 1980s. For modeling purposes, the series could be much shortened, since the analysis revealed one strong factor underlying all the positive attributes. On the other hand, inclusion of items focused on negative attributes, or factors that might serve as barriers to interest in the Army (e.g., danger of death), would probably provide a more comprehensive measure of attitudes toward the Army. In turn, such an attitude measure would be expected to have even stronger relationships with enlistment intentions than that obtained in this study.

Another modification of the attitude measures should be investigated in future research. As noted previously, the ACOMS attitude measures referred to the Army, not Army enlistment. Fishbein and Ajzen recommend that the attitude measures focus on the behavior of interest (i.e., enlisting in the Army). This shift in focus may usefully distinguish between individuals who have positive views of the Army as an institution, but who have no intention of personally coming in contact with it.

In addition, it would also be useful to restructure the enlistment propensity measure more closely to the intention construct. Such a measure would focus on enlistment *intention*, rather than the broader *likelihood* of joining the military. We expect that a more focused enlistment intention measure would improve the predictability of enlistment behaviors.

Our models showed that parental factors play an important role in youth enlistment intentions and behaviors. This clearly implies that all surveys of youth must include questions regarding their perceptions about the extent to which their parents support them for enlistment. It may be useful as well to try to achieve a better understanding of the factors that influence such perceptions about parental support, in order to determine to what extent such perceptions may be susceptible to external intervention.

The inclusion of parents in the ACOMS sample was unique among the surveys focused on enlistment interest. In general, one can presume that the decision to survey parents as well as youth in future efforts must be made in view of the value of the information relative to the cost of collecting such information. The results of our modeling effort to date suggest that parental communication with their sons regarding enlistment-related topics was a very strong influence on the their sons' actual application to the military, adding substantially to the variance explained in enlistment behaviors. These results merit further evaluation, given the preliminary nature of the linked models. If these findings are sustained under further analysis, a strong argument could be made to survey parents as well as youth.

Finally, our results demonstrate that enlistment interests are highly related to youth interests and behaviors related to enrolling in college and in obtaining a civilian job. The ACOMS measures of work and college intentions, as well the intermediate behaviors toward work and college, are more refined than similar measures in other surveys. Our analyses suggest that it would be worthwhile to include such measures of intentions and behaviors in future surveys.

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Appendix A

ACOMS Youth and Parent Questionnaires

ACOMS: RDD HOUSEHOLD SCREENER

SC-1 INTRODUCTION: Hello, this is (YOUR NAME). I am calling from Westat, a research firm near Washington, D.C. We are conducting an important national survey for the Federal Government. First, I'd like to make sure I've dialed correctly. Is this (AREA CODE AND NUMBER)?

(INTERVIEWER: ASK TO SPEAK WITH ADULT HOUSEHOLD MEMBER IF PERSON ANSWERING TELEPHONE SOUNDS LIKE A YOUTH)

YES	1	(SC-2)
NO	2	(TERMINATE. 1 CODE REDIAL) MAX OF 2 CALLS)
GO TO RESULT	3	

SC-2 We are calling a random sample of telephone numbers in connection with this study, and we need to know what type of number this is.

Is this phone number for

home use, ...	1	(SC-4D)
business and home use, or.	2	(SC-3)
business use only?	3	(TERMINATE. 1 CODE NON-RESIDENTIAL)
REFUSED	-7	(TERMINATE. 2 CODE INIT REFUSAL)
DON'T KNOW	-8	(ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER, RESTART AT SC-2RI. IF NONE AVAILABLE, TERMINATE, 4 OR 5 CODE CALLBACK)

SC-3. Is this phone located in a home or in a business?

HOME	1	(SC-4D)
BOTH	2	(SC-4D)
BUSINESS	3	(TERMINATE. 1 CODE NON-RESIDENTIAL)
REFUSED	-7	(TERMINATE. 2 CODE INIT REFUSAL)
DON'T KNOW	-8	(ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER, RESTART AT SCKNOW. IF NONE AVAILABLE, TERMINATE, 5 CODE CALLBACK)

SC-4D. Are you a member of this household?

YES	1	(SC-5)
NO	2	(SCKNOW IF NONE AVAILABLE, TERMINATE, 5 CODE CALLBACK)
REFUSED.....	-7	(TERMINATE. 2 CODE INIT REFUSAL)
DON'T KNOW	-8	(SCKNOW IF NONE AVAILABLE, TERMINATE, 5 CODE CALLBACK)

SC-5. Since the survey we are conducting for the U.S. government is concerned with the career plans of young adults, we need to know how many young adults live in your household.

How many people between the ages of 13 and 24 live in your household including those on vacation, away on business or living away at school?

NONE	00	(SC-4B, 6 CODE INELIGIBLE NO ONE 13-24)
REFUSED	-7	(TERMINATE. 7 CODE INIT REFUSAL)
DON'T KNOW	-8	(SCKNOW IF NONE AVAILABLE, TERMINATE 5 CODE CALLBACK)

CATI CHECK #SC1: IS THERE MORE THAN ONE HOUSEHOLD MEMBER 13 THROUGH 24?
[SC-5 > 1]

YES 1 (SC-7)
NO 2 (SC-6)

SC-6. Is this person male or female?

MALE	1	(CODE SC-7 AS 01; CODE SC-7A AS 00, AND THEN GO TO SC-8)
FEMALE	2	(CODE SC-7 AS 00; CODE SC-7A AS 01 AND THEN GO TO SC-8 FOR FEMALES)
REFUSED	-7	(TERMINATE. 7 CODE INIT REFUSAL)
DON'T KNOW	-8	(ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER RESTART AT SC-5 IF NONE AVAILABLE, TERMINATE 5 CODE CALLBACK)

SC-7. Of these (NUMBER FROM SC-5), how many are male?

NONE	00	
REFUSED	-7	(TERMINATE. 7 CODE INIT REFUSAL)
DON'T KNOW	-8	(ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER RESTART AT SC-5A IF NONE AVAILABLE, TERMINATE 5 CODE CALLBACK)

CATI CHECK SC1A1:	IS THE NUMBER OF MALES EQUAL TO THE TOTAL 13-24 YEAR OLDS? [SC-7 = SC-5]	
YES	1	(CODE SC7A=0 CATI CHECK #SC1A)
NO	2	(SC-7A)

SC-7A. So, of the (NUMBER FROM SC-5) 13 to 24 year olds, your household has (SC-7) males, and ((SC-5)-(SC-7)) females?

YES	1	(CATI CHECK #SC1A)
NO	2	(SC7ACHK)
REFUSED	-7	(TERMINATE. 7 CODE INIT REFUSAL)
DON'T KNOW	-8	(SCKNOW IF NONE AVAILABLE, TERMINATE 5 CODE CALLBACK)

CATI CHECK #SC1A:	ARE THERE ANY 13-24 YEAR OLD MALES IN THE HOUSEHOLD? [SC-7 > 0]		
	YES	1	(CATI CHECK #SC1B)
	NO	2	(CATI CHECK #SC1B)
#SC1B:	ARE THERE ANY 13-24 YEAR OLD FEMALES IN THE HOUSEHOLD? [SC-7A > 0]		
	YES	1	(CATI CHECK #SC1D)
	NO	2	(CATI CHECK #SC1D)
#SC1D:	IS THE HOUSEHOLD IN THE FEMSAMP?		
	YES	1	(ENUMERATE RESPONDENT, MALES, THEN FEMALES) (CONF)
	NO	2	(ENUMERATE RESPONDENT, THEN MALES) (CONF)

[RESPONDENT NAME AND AGE ENUMERATED, THEN MALES, THEN FEMALES]

CONF. Your answers to this survey are voluntary and confidential. The information you give us will only be used in connection with information about many other young adults. Neither your name or any other identifying information will appear on any report of this study.

While you may choose not to answer any question, this research is authorized by law, and the information you give is is protected by an Act of Congress called the Privacy Act of 1974.

SC-7B. Are you between 13 and 24 years old?

YES	1	(SC-8A)
NO	2	(CATI CHECK #SC3)
REFUSED	-7	(TERMINATE & CODE INIT REFUSAL)
DON'T KNOW	-8	(SCKNOW IF NONE AVAILABLE, TERMINATE & CODE CALLBACK)

SC-8A. Please give me your first name.

_____	(SC-8)
REFUSED	(TERMINATE. & CODE INIT REFUSAL))
DON'T KNOW	(SCKNOW IF NONE AVAILABLE, TERMINATE & CODE CALLBACK)

SC-8. (Starting with the oldest) Please give me the first name of (each/the/the oldest) (male/female) in your household between 13 and 24. (RECORD ALL NAMES IN GRID BELOW.)

1. _____
2. _____
3. _____
4. _____
5. _____

REFUSED	-7	(TERMINATE. & CODE INIT REFUSAL)
DON'T KNOW	-8	(ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER RESTART AT SC-5RI IF NONE AVAILABLE, TERMINATE & CODE CALLBACK)

CATI CHECK #SC2: ASK SC-9 FOR RESPONDENT, 1ST MALE/FEMALE LISTED IN SC-8

SC-9. What is (PERSON'S/your) date of birth?

_____/____/____ (CATI CHECK #SC3)
MM DD YY

REFUSED ..... -7 (SC-10)
DON'T KNOW ..... -8 (SC-10)

SC-10. How old is (PERSON/are you)?

_____ (CATI CHECK #SC3)

REFUSED ..... -7 (SC-10A)
DON'T KNOW ..... -8 (SC-10A)

SC-10A. (Is PERSON/Are you) 13 to 15 years old, 16 to 20 years old, 21 to 24 years old, or some other age?

13 to 15 ..... 1 (CATI CHECK #SC2A)
16 to 20 ..... 2 (CATI CHECK #SC2A)
21 to 24 ..... 3 (CATI CHECK #SC2A)
SOME OTHER AGE ..... 4 (CATI CHECK #SC2A)
REFUSED ..... -7 (TERMINATE. 8 CODE INIT REFUSAL)
DON'T KNOW ..... -8 (ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER RESTART AT SC-5RI
IF NONE AVAILABLE, TERMINATE 5 CODE CALLBACK)

CATI CHECK #SC2A: IS CURRENT ENUMERATION FOR THE RESPONDENT?
YES 1 (SC-10B)
NO ..... 2 (CATI CHECK #SC3)

SC-10B. [IF NOT OBVIOUS, ASK] What is your sex?

MALE 1 (SC-10C)
FEMALE 2 (SC-10C)
REFUSED ..... -7 (TERMINATE. 8 CODE INIT REFUSAL)
DON'T KNOW ..... -8 (ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER RESTART AT SC-5RI
IF NONE AVAILABLE, TERMINATE 5 CODE CALLBACK)

SC-10C. Are there any other youths between 13 and 24 years old in your household?

YES	1(CATI CHECK #SC3)
NO	2(CATI CHECK #SC3)
REFUSED	-7(CATI CHECK #SC3)
DON'T KNOW	-8(CATI CHECK #SC3)

CATI CHECK #SC3: IS PERSON BETWEEN 13 AND 24 YEARS?

YES ..... 1 (CATI CHECK #SC5)
NO ..... 2 (CATI CHECK #SC4)

#SC4: FLAG AS INELIGIBLE AND GO TO CATI CHECK #SC6.

#SC5: RECORD SEX

#SC6: IS D.O.B./AGE NEEDED FOR MORE MALES/FEMALES?

YES ..... 1 (SC-9 FOR NEXT MALE/FEMALE)
NO ..... 2 (CATI CHECK #SC7)

#SC7: ANY MALES/FEMALES 16-24 YEARS?
YES ..... 1 (CATI CHECK #SC7A FOR RESP, 1ST MALE/FEMALE AGED 16-24)
NO ..... 2 (CATI CHECK #SC24)

[ENUMERATION OF ELIGIBILITY INFORMATION FOR RESPONDENT, MALES, AND FEMALES]

CATI CHECK #SC7A: IS PERSON < 17 YEARS?

YES 1 (SC13)
NO 2 (SC-11)

SC-11. (Has PERSON/Have you) ever been in active military service, the National Guard or the Reserves?

YES	1 (SC-11A)
NO	2 (SC-12)
REFUSED	-7 (SC-12)
DON'T KNOW	-8 (SC-12)

SC-11A. (Is PERSON/Are you) presently serving in the military?

YES	1	(CATI CHECK #SC8)
NO	2	(SC-12)
REFUSED	-7	(SC-12)
DON'T KNOW	-8	(SC-12)

SC-12. (Has he/Has she/Have you) been accepted for service in a branch of the Armed Forces and (is/are) now waiting to go on active duty?

YES	1	(CATI CHECK #SC8)
NO	2	(SC-13A)
REFUSED	-7	(SC-13A)
DON'T KNOW	-8	(SC-13A)

SC-13A. Do you have a regular high school diploma, a GED, an ABE, or some other kind of certificate of high school completion?

REGULAR HIGH SCHOOL DIPLOMA	1	(SC-14)
GED (GENERAL EDUCATIONAL DEVELOPMENT)	2	(SC-14)
ABE (ADULT BASIC EDUCATION) CERTIFICATE (E.G. CORRESPONDENCE, NIGHT SCHOOL)	3	(SC-14)
SOME OTHER KIND OF CERTIFICATE	4	(SC-14)
NONE OF THE ABOVE	5	(SC-14)
REFUSED	-7	(SC-14)
DON'T KNOW	-8	(SC-14)

SC-14. (Is PERSON/are you) currently enrolled in school?

YES	1	(SC-15)
NO	2	(SC-13)
REFUSED	-7	(SC-13)
DON'T KNOW	-8	(SC-13)

SC-15. In what type of school or training program (Is he/Is she/Are you) currently enrolled?

TAKING DAY COURSES IN REGULAR, DAY HIGH SCHOOL	01	(SC-16)
ADULT BASIC EDUCATION (ABE) (HS COURSES IN NIGHT SCHOOL OR BY CORRESPONDENCE)	02	(SC-13)
GED OR HIGH SCHOOL EQUIVALENCY PROGRAM	03	(SC-13)
SKILL DEVELOPMENT PROGRAM (EG PUBLIC EMPLOYMENT, JOBS, OIC WIN, CETA)	04	(SC-13)
ON-THE-JOB TRAINING PROGRAM	05	(SC-13)
APPRENTICESHIP PROGRAM	06	(SC-13)
VOCATIONAL, BUSINESS OR TRADE SCHOOL	07	(SC-13)
A 2 YEAR JUNIOR OR COMMUNITY COLLEGE	08	(SC-13)
A 4 (5) YEAR COLLEGE OR UNIVERSITY	09	(SC-17)
SOME OTHER SCHOOL	10	(SC-13)
REFUSED	-7	(SC-13)
DON'T KNOW	-8	(SC-13)

SC-16. (Is he/Is she/Are you) currently enrolled in 9th, 10th, 11th or 12th grade?

9TH	9	(SC-13B)
10TH	10	(SC-13B)
11TH	11	(SC-13B)
12TH	12	(SC-13B)
REFUSED	-7	(SC-13)
DON'T KNOW	-8	(SC-13)

SC-17. (Is he/Is she/Are you) currently enrolled in (his/her/your) first, second, third, fourth or fifth year of college?

FIRST YEAR (FRESHMAN)	1	(SC-13B)
SECOND YEAR (SOPHOMORE)	2	(SC-13B)
THIRD YEAR (JUNIOR)	3	(SC-13B)
FOURTH YEAR (SENIOR)	4	(SC-13B)
FIFTH YEAR (OF A 5 YEAR COLLEGE)	5	(SC-13B)
REFUSED	-7	(SC-13)
DON'T KNOW	-8	(SC-13)

SC-13B. So, the highest level (college/high school) that (you have/he has/she has) completed and received credit for is (the) (college year/high school grade)?

YES	1	(SC-18)
NO	2	(SC-13)
REFUSED	-7	(SC-13)
DON'T KNOW	-8	(SC-13)

SC-13. What is the highest grade or level of schooling that (he has/she has/you have) completed and received credit for?

LESS THAN 8TH GRADE	07	(SC-18)
8TH GRADE	08	(SC-18)
9TH GRADE	09	(SC-18)
10TH GRADE	10	(SC-18)
11TH GRADE	11	(SC-18)
12TH GRADE	12	(SC-18)
1ST YEAR OF 4 YEAR COLLEGE (FR)	13	(SC-18)
2ND YEAR OF 4 YEAR COLLEGE (SO)	14	(SC-18)
3RD YEAR OF 4 YEAR COLLEGE (JR)	15	(SC-18)
4TH YEAR OF 4 YEAR COLLEGE (SR)	16	(CATI CHECK #SC8)
5TH YEAR COLLEGE, 1ST YEAR GRADUATE OR PROFESSIONAL SCHOOL	17	(CATI CHECK #SC8)
2ND YEAR GRADUATE OR PROFESSIONAL SCHOOL	18	(CATI CHECK #SC8)
3RD YEAR GRADUATE OR PROFESSIONAL SCHOOL	19	(CATI CHECK #SC8)
MORE THAN 3 YEARS GRADUATE OR PROFESSIONAL SCHOOL	20	(CATI CHECK #SC8)
1ST YEAR OF JR OR COMMUNITY COLLEGE	21	(SC-18)
2ND YEAR OF JR OR COMMUNITY COLLEGE.	22	(SC-18)
1ST YEAR OF VOCATIONAL BUSINESS OR TRADE SCHOOL	23	(SC-18)
2ND YEAR OF VOCATIONAL BUSINESS OR TRADE SCHOOL	24	(SC-18)
MORE THAN 2 YEARS OF VOCATIONAL BUSINESS OR TRADE SCHOOL	25	(SC-18)
REFUSED	-7	(SC-18)
DON'T KNOW	-8	(SC-18)

SC-18. (Is he/Is she/Are you) living at this address?

YES	1	(SC-19)
NO	2	(CATI CHECK #SC-7B)
REFUSED	-7	(CATI CHECK #SC-7B)
DON'T KNOW	-8	(CATI CHECK #SC-7B)

CATI CHECK #SC7B: IS RESPONDENT CURRENTLY ENROLLED IN IN COLLEGE?
(SC-14=1) AND (SC-15=8,9)
YES 1 (SC-18A)
NO 2 (SC-19)

SC-18A (Is he/Is she/Are you) living in undergraduate student housing?

[PROBE: That is, undergraduate housing that is owned, leased or sponsored by the school (he is/she is/you are) attending?

YES	1	(SC-19)
NO	2	(CATI CHECK #SC8)
REFUSED	-7	(SC-19)
DON'T KNOW	-8	(SC-19)

CATI CHECK #SC8: FLAG AS INELIGIBLE FOR MAIN INTERVIEW AND GO TO CATI CHECK #SC9

SC-19. Please tell me whether (PERSON is/you are):

White	1
Black	2
Asian or Pacific Islander, or	3
American Indian or Alaskan Native	4
REFUSED	-7
DON'T KNOW	-8

SC-20. (Is he/Is she/Are you) Hispanic?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

SC-21. What is (your/PERSON's) last name?

REFUSED	-7
DON'T KNOW	-8

CATI CHECK #SC9: MORE 16-24 YEAR OLD MALES/FEMALES TO ENUMERATE?

YES ..... 1 (CATI CHECK #SC7A FOR NEXT MALE/FEMALE)
NO ..... 2 (CATI CHECK #SC24)

#SC24: IS ANYONE IN THIS HOUSEHOLD ELIGIBLE?

YES 1 (SC-21)
NO ..... 2 (CATI CHECK #SC25)

#SC25: ARE THERE ANY 13-15 YEAR OLDS IN THIS HOUSEHOLD

YES 1 (SC-4B)
NO ..... 2 (TERMINATE.)

SC-4B. What county do you live in?

_____		(SC-4C)
REFUSED.....	-7	(TERMINATE. 2 CODE INIT REFUSAL)
DON'T KNOW	-8	(ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER, RESTART AT SC-2. IF NONE AVAILABLE, TERMINATE, 5 CODE CALLBACK)

SC-4C. What is your zip code?

_____		(SC-35)
REFUSED.....	-7	(TERMINATE. 2 CODE INIT REFUSAL)
DON'T KNOW	-8	(ASK FOR KNOWLEDGEABLE HOUSEHOLD MEMBER, RESTART AT SC-2. IF NONE AVAILABLE, TERMINATE, 5 CODE CALLBACK)

CATI CHECK #SC25A1: IS COUNTY OR ZIP MISSING?
SC-4B OR SC-4C = -7 OR -8

YES	1	(SC-4E)
NO	2	(SC-35)

SC-4E. What city do you live in?

_____		(SC-35)
REFUSED	-7	(SC-35)
DON'T KNOW	-8	(SC-35)

SC-35. Are there any telephone numbers in addition to (SAMPLE TELEPHONE NUMBER) in your home?

YES	1	(SC-36)
NO	2	(CATI CHECK #SC25A)
REFUSED	7	(CATI CHECK #SC25A)
DON'T KNOW	8	(CATI CHECK #SC25A)

SC-36 Is this number for

home use, ...	1	(CATI CHECK #SC25A)
business and home use, or.	2	(SC-36A)
business use only?	3	(CATI CHECK #SC25A)
REFUSED	-7	(CATI CHECK #SC25A)
DON'T KNOW	-8	(CATI CHECK #SC25A)

SC-36A. Is this phone located in a home or in a business?

HOME ..... 1 (CATI CHECK #SC25A)
BOTH ..... 2 (CATI CHECK #SC25A)
BUSINESS ..... 3 (CATI CHECK #SC25A)
REFUSED ..... -7 (CATI CHECK #SC25A)
DON'T KNOW ..... -8 (CATI CHECK #SC25A)

CATI CHECK #SC25A: ARE THERE ANY 13 TO 15 YEAR OLD HOUSEHOLD MEMBERS?

YES 1 (INTRO13)
NO ..... 2 (CATI CHECK #SC26)

CATI CHECK #SC26: ARE THERE ANY ELIGIBLE PERSONS?

YES ..... 1 (HHCHOOSE)
NO ..... 2 (TERMINATE 8)

TERMINATION SCREENS

TERM1 Thank you very much, but I seem to have dialed a wrong number. It is possible that your number will be dialed again at a later time.

REDIAL	1 (RESTART AT INTRO)
NON-WORKING NUMBER [IF NUMBER HAS BEEN DIALED TWICE]	2

TERM2 Thank you very much, that's all the question that I have at this time.

TERM3 Thank you very much, that's all the questions I have at this time.

CODE NON-RESIDENTIAL

TERM5 ENTER THE RESULT CODE USING THE DEFINITIONS BELOW:

CALLBACK - NO APPOINTMENT	4
CALLBACK - APPOINTMENT	5 (APPT)

TERM6 At this time, we are only interested in interviewing in households with 13 to 24 year olds so I have no further questions for you at this time. The information you have given us is confidential and is protected under the Privacy Act of 1974. This survey is for research purposes only, and is authorized by law in Title 10 USC Sections 503 and 2359. Thank you very much for your time. Good bye.

CODE NO ELIGIBLE HOUSEHOLD MEMBERS

TERM7 The information you have given us is confidential. This survey is for research on how young people make career decisions and is authorized by law in Title 10 USC Sections 503 and 2358. Thank you for your time. Good bye.

TERM8 I have no further questions for you at this time. The information you have given us is confidential and is protected by an Act of Congress called the Privacy Act of 1974. This survey is for research purposes only and is authorized by law in Title 10 USC Sections 503 and 2358. Thank you very much for your cooperation. Good bye.

TERM9 Let me remind you that the information you have given us is confidential and is protected by an Act of Congress called the Privacy Act of 1974. This survey is for research purposes only and is authorized by law in Title 10 Sections 503 and 2358 and Executive order 9397.

I have no further questions to ask you at this time, but would you please stay on the line for one moment so that I can check to see if I need to speak with anyone else in your household.

Thank you very much for your cooperation. Good bye.

RESTART SCREENS

SC-2RI. Hello, this is (YOUR NAME). I am calling from Westat, a research firm near Washington, D.C. We are conducting an important national survey for the Federal Government.

SC-KNOW. Hello, this is (YOUR NAME). I am calling from Westat, a research firm near Washington, D.C. We are conducting an important national survey for the Federal Government. The survey is concerned with the career plans of young adults. Your answers are voluntary and will be completely confidential. Your identity will never be known by anyone except the research project staff.

I would like to begin by asking some questions about household members.

13-15 YEAR OLD TRACKING INFORMATION

CATI CHECK #SC28: WERE ANY 13 TO 15 YR OLDS ENUMERATED? [SC-9, 10, 23 OR 24 >12 AND <16]
YES 1 (INTRO13)
NO ..... 2 (CATI CHECK #SC26

INTRO13
It is possible that we will call again sometime in the future to obtain some updated information from you.

SC-38. Please give me the name, address and telephone number of a friend or family member not at this address who would know how to get in touch with you in case we need to contact you again and have a hard time getting hold of you.

NAME: _____

STREET: _____

CITY: _____

STATE: _____

ZIP: _____

PHONE: _____

[GO TO CATI CHECK #SC26]

INTRODUCTION: I have some questions about your educational and employment experiences.

EE-2. Do you have a regular high school diploma, a GED, an ABE, or some other kind of certificate of high school completion?

REGULAR HIGH SCHOOL DIPLOMA	1
GED (GENERAL EDUCATIONAL DEVELOPMENT)	2
ABE (ADULT BASIC EDUCATION) CERTIFICATE (E.G., CORRESPONDENCE, NIGHT SCHOOL)	3
SOME OTHER KIND OF CERTIFICATE	4
NONE OF THE ABOVE	5
REFUSED	-7
DON'T KNOW	-8

EE-4. Are you currently enrolled in school, college, a vocational or technical program, apprenticeship or a job training program?

YES	1	(EE-6)
NO	2	(EE-5)
REFUSED	-7	(EE-5)
DON'T KNOW	-8	(EE-5)

EE-5. In what month and year did you last attend any type of school or training program?

(2-DIGITS)/(2-DIGITS)
MONTH YEAR

EE-6. What kind of school or training program (are you/were you last) enrolled in:

TAKING H.S. COURSES IN REGULAR DAY HIGH SCHOOL	1
GED OR HIGH SCHOOL EQUIVALENCY PROGRAM	2
ADULT BASIC EDUCATION (ABE) (H.S. COURSES IN NIGHT SCHOOL OR BY CORRESPONDENCE)	3
SKILL DEVELOPMENT PROGRAM (E.G., PUBLIC EMPLOYMENT, JOBS, OIC, WIN, CETA)	4
ON THE JOB TRAINING PROGRAM	5
APPRENTICESHIP PROGRAM	6
VOCATIONAL, BUSINESS OR TRADE SCHOOL	7
2 YEAR JR OR COMMUNITY COLLEGE	8
4 YEAR COLLEGE OR UNIVERSITY	9
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #EE1: IS RESPONDENT CURRENTLY ENROLLED?
(EE-4=1)
YES ..... 1 (CATI CHECK #EE-1A)
NO 2 (EE-1)

CATI CHECK #EE1A IS RESPONDENT IN HS OR 4 YR COLLEGE?
(EE-6=1) OR (EE-6=9)
HS 1 (EE-6A)
COLLEGE 2 (EE-6B)
OTHER 3 (EE-1)

EE-6A. (Is he/Is she/Are you) <u>currently</u> enrolled in 9th, 10th, 11th or 12th grade?

9TH 9 (EE-1VER)
10TH 10 (EE-1VER)
11TH 11 (EE-1VER)
12TH 12 (EE-1VER)
REFUSED ..... -7 (EE-1)
DON'T KNOW ..... -8 (EE-1)

EE-6B. (Is he/Is she/Are you) <u>currently</u> enrolled in (his/her/your) first, second, third, fourth or fifth year of college?

FIRST YEAR (FRESHMAN)..... 1 (EE-1VER)
SECOND YEAR (SOPHOMORE)..... 2 (EE-1VER)
THIRD YEAR (JUNIOR)..... 3 (EE-1VER)
FOURTH YEAR (SENIOR)..... 4 (EE-1VER)
FIFTH YEAR (OF A 5 YEAR COLLEGE) 5 (EE-1VER)
REFUSED ..... -7 (EE-1)
DON'T KNOW ..... -8 (EE-1)

EE-1VER. So, the highest level (college/high school) that (you have/he has/she has) <u>completed</u> and <u>received credit</u> for is (the) (college year/high school grade)?

YES 1 (EE-3)
NO 2 (EE-1)
REFUSED ..... -7 (EE-1)
DON'T KNOW ..... -8 (EE-1)

EE-1. What is the highest grade or year of school or college that you have completed and received credit for?

LESS THAN 8TH GRADE	07	(EE-3)
8TH GRADE	08	(EE-3)
9TH GRADE	09	(EE-3)
10TH GRADE	10	(EE-3)
11TH GRADE	11	(EE-3)
12TH GRADE	12	(EE-3)
1ST YEAR OF 4 YEAR COLLEGE (FR)	13	(EE-3)
2ND YEAR OF 4 YEAR COLLEGE (SO)	14	(EE-3)
3RD YEAR OF 4 YEAR COLLEGE (JR)	15	(EE-3)
4TH YEAR OF 4 YEAR COLLEGE (SR)	16	(EE-3)
5TH YEAR COLLEGE, 1ST YEAR GRADUATE OR PROFESSIONAL SCHOOL	17	(EE-3)
2ND YEAR GRADUATE OR PROFESSIONAL SCHOOL	18	(EE-3)
3RD YEAR GRADUATE OR PROFESSIONAL SCHOOL	19	(EE-3)
MORE THAN 3 YEARS GRADUATE OR PROFESSIONAL SCHOOL	20	(EE-3)
1ST YEAR OF JR OR COMMUNITY COLLEGE	21	(EE-3)
2ND YEAR OF JR OR COMMUNITY COLLEGE.	22	(EE-3)
1ST YEAR OF VOCATIONAL BUSINESS OR TRADE SCHOOL	23	(EE-3)
2ND YEAR OF VOCATIONAL BUSINESS OR TRADE SCHOOL	24	(EE-3)
MORE THAN 2 YEARS OF VOCATIONAL BUSINESS OR TRADE SCHOOL	25	(EE-3)
REFUSED	-7	(EE-3)
DON'T KNOW	-8	(EE-3)

EE-3. What is the highest grade or year of school or college you plan to eventually complete?

LESS THAN 8TH GRADE	07	(EE-7)
8TH GRADE	08	(EE-7)
9TH GRADE	09	(EE-7)
10TH GRADE	10	(EE-7)
11TH GRADE	11	(EE-7)
12TH GRADE	12	(EE-7)
1ST YEAR OF 4 YEAR COLLEGE (FR)	13	(EE-7)
2ND YEAR OF 4 YEAR COLLEGE (SO)	14	(EE-7)
3RD YEAR OF 4 YEAR COLLEGE (JR)	15	(EE-7)
4TH YEAR OF 4 YEAR COLLEGE (SR)	16	(EE-7)
5TH YEAR COLLEGE, 1ST YEAR GRADUATE OR PROFESSIONAL SCHOOL	17	(EE-7)
2ND YEAR GRADUATE OR PROFESSIONAL SCHOOL	18	(EE-7)
3RD YEAR GRADUATE OR PROFESSIONAL SCHOOL	19	(EE-7)
MORE THAN 3 YEARS GRADUATE OR PROFESSIONAL SCHOOL	20	(EE-7)
1ST YEAR OF JR OR COMMUNITY COLLEGE	21	(EE-7)
2ND YEAR OF JR OR COMMUNITY COLLEGE.	22	(EE-7)
1ST YEAR OF VOCATIONAL BUSINESS OR TRADE SCHOOL	23	(EE-7)
2ND YEAR OF VOCATIONAL BUSINESS OR TRADE SCHOOL	24	(EE-7)
MORE THAN 2 YEARS OF VOCATIONAL BUSINESS OR TRADE SCHOOL	25	(EE-7)
REFUSED	-7	(EE-7)
DON'T KNOW	-8	(EE-7)

CATI CHECK #EE2A: IS EE1 > 8?

YES 1 (EE-7)
NO 2 (EE-16)

EE-7. (Did/Does) your school use letter or number grades?

LETTER	1
NUMBER	2
NEITHER	3
REFUSED	-7
DON'T KNOW	-8

[IF LETTER ASK LETTER, IF NUMBER ASK NUMBER]

What grades (do/did) you usually get in school? (Are/Were) they:
[PROBE: This includes grades 9 through 12]

mostly A's	(AVERAGE OF 90-100)	1
Mostly A's & B's	(AVERAGE OF 85-89)	2
Mostly B's	(AVERAGE OF 80-84)	3
Mostly B's & C's	(AVERAGE OF 75-79)	4
Mostly C's	(AVERAGE OF 70-74)	5
Mostly C's & D's	(AVERAGE OF 65-69)	6
Mostly D's & F's	(AVERAGE OF 64 AND BELOW)	7
REFUSED		-7
DON'T KNOW		-8

EE-9_12. Now I have a list of high school mathematics and technical courses. As I read each one, please tell me whether you have taken or plan to take that course in regular high school. Elementary algebra?

TAKEN	1
PLAN TO TAKE	2
NOT TAKEN AND NOT PLANNING TO	3
REFUSED	-7
DON'T KNOW	-8

EE-9_12. Plane geometry?

TAKEN	1
PLAN TO TAKE	2
NOT TAKEN AND NOT PLANNING TO	3
REFUSED	-7
DON'T KNOW	-8

EE-9_12. Intermediate algebra?

TAKEN	1
PLAN TO TAKE	2
NOT TAKEN AND NOT PLANNING TO	3
REFUSED	-7
DON'T KNOW	-8

EE-9_12. Trigonometry?

TAKEN	1
PLAN TO TAKE	2
NOT TAKEN AND NOT PLANNING TO	3
REFUSED	-7
DON'T KNOW	-8

EE-16. Are you currently employed either full-time or part-time?

YES	1	(EE-19)
NO	2	(EE-17)
REFUSED	-7	(EE-17)
DON'T KNOW	-8	(EE-17)

EE-17. Are you looking for work now?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

EE-19. How many hours per week (do/did) you usually work at your (main/last) job?

		(CATI CHECK #EE3)
NEVER HAD A JOB	0	(EE-24)
REFUSED	-7	(CATI CHECK #EE3)
DON'T KNOW	-8	(CATI CHECK #EE3)

CATI CHECK #EE3: DID/DOES YOUTH WORK FULL TIME?
[EE-19 > 34]

YES	1	(EE-24)
NO	2	(EE-20)

EE-20. Have you ever held a full-time job? [MORE THAN 34 HOURS PER WEEK]

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

EE-24. How easy or difficult is it for someone your age to get a full-time job in your community? Is it....

almost impossible	1
very difficult	2
somewhat difficult, or	3
not difficult at all?	4
REFUSED.....	-7
DON'T KNOW.....	-8

[GO TO INTENTIONS & PROPENSITY MODULE]

IP-1. Now let's talk about your plans for the next few years. What do you think you might be doing? (PROBE: Anything else?) [RECORD ALL THAT APPLY]

GOING TO SCHOOL	1	(IP-7)
WORKING	2	(IP-7)
DOING NOTHING	3	(IP-7)
JOINING THE MILITARY/SERVICE	4	(IP-3)
OTHER	5	(IP-7)
REFUSED	-7	(IP-7)
DON'T KNOW	-8	(IP-7)

IP-3. You said you might be joining the military. Which branch of the service would that be?

AIR FORCE	1	(IP-4)
ARMY	2	(IP-4)
COAST GUARD	3	(IP-4)
MARINE CORPS	4	(IP-4)
NAVY	5	(IP-4)
REFUSED	-7	(IP-7)
DON'T KNOW	-8	(IP-7)

IP-4. Which type of service would that be? Would it be:

Active Duty	1
The Reserve, or	2
The National Guard	3
REFUSED	-7
DON'T KNOW	-8

IP-5. If you found for some reason you couldn't join the (SERVICE FROM IP-3) which branch of the service would be your next choice?

AIR FORCE	1	(IP-6)
ARMY	2	(IP-6)
COAST GUARD	3	(IP-6)
MARINE CORPS	4	(IP-6)
NAVY	5	(IP-6)
NONE	6	(IP-7)
REFUSED	-7	(IP-7)
DON'T KNOW	-8	(IP-7)

IP-6. Which type of service would that be? Would it be:

Active Duty	1
The Reserve, or	2
The National Guard	3
REFUSED	-7
DON'T KNOW	-8

IP-7. How likely is it that you will be serving in the military? Would you say...

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

IP-14. How likely is it that you will be going to college? Would you say...

definitely	1 (IP-15)
probably	2 (IP-15)
probably not, or	3 (IP-16)
definitely not?	4 (IP-16)
REFUSED	-7 (IP-16)
DON'T KNOW	-8 (IP-16)

IP-15: Do you think that you will go to a 2-year or a 4-year college?

2 YEAR COLLEGE	1
4 YEAR COLLEGE	2
REFUSED	-7
DON'T KNOW	-8

IP-11. How likely is it that you will participate in at least one college course offered by the Army Reserve Officer's Training Corps, or Army R.O.T.C? Would you say...

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

IP-16. How likely is it that you will be going to vocational or technical school? Would you say...

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

IP-12. How likely is it that you will be working in a civilian job? Would you say...

definitely	1	(IP-13)
probably	2	(IP-13)
probably not, or	3	(CATI CHECK #IP1)
definitely not?	4	(CATI CHECK #IP1)
REFUSED	-7	(CATI CHECK #IP1)
DON'T KNOW	-8	(CATI CHECK #IP1)

IP-13. Will this be full-time or part-time?

FULL-TIME	1
PART-TIME	2
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #IP1: IS YOUTH PLANNING TO BE WORKING DURING THE NEXT FEW YEARS?
[IP-1 = 2]

YES ..... 1 (CATI CHECK #IP2)
NO 2 (IP-8)

#IP2: IS YOUTH CURRENTLY WORKING?
[EE-16 = 1 OR -7 OR -8]

YES 1 (IP-2)
NO 2 (IP-8)
REFUSED ..... -7 (IP-2)
DON'T KNOW .. -8 (IP-2)

IP-2. Do you think that you will be working in the same job or occupation you now have, or a different job or occupation?

SAME JOB OR OCCUPATION	1
DIFFERENT JOB OR OCCUPATION	2
REFUSED	-7
DON'T KNOW	-8

IP-8. How likely is it that you will be serving on active duty in the Army? Would you say...

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

IP-9. How likely is it that you will be serving in the Army National Guard? Would you say...

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

IP-10. How likely is it that you will be serving in the Army Reserve? Would you say...

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #IP3: IS YOUTH PLANNING TO GO TO COLLEGE DURING THE NEXT FEW YEARS? [IP-14 = 1 OR 2]

YES 1 (IP-11A)
NO 2 (IP-17)

IP-11A. How likely is it that you will receive an officer's commission through participation in the Army Reserve Officer's training Corps, that is, the ROTC?

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

IP-17. We've talked about several things you might be doing in the next few years. Taking everything into consideration, what are you most likely to be doing in the (next year/fall after you finish high school)?(IF "GOING TO SCHOOL" OR "WORKING" PROBE: Will that be full-time or part-time?)
[RECORD ALL THAT APPLY]

GOING TO SCHOOL FULL-TIME	1
GOING TO SCHOOL PART-TIME	2
WORKING FULL-TIME	3
WORKING PART-TIME	4
SERVING IN THE MILITARY	5
BEING A FULL-TIME HOMEMAKER	6
OTHER	7
REFUSED	-7
DON'T KNOW	-8

IP-20. How likely is it that you will talk to someone [such as, family, friends, or teacher] about joining the Army? Would you say...

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

IP-21. How likely is it that you will do something about joinir Army [such as, see an Army Recruiter, call a toll-free r answer an Army ad, or visit an Army base]?

Would you say...

definitely	1
probably	2
probably not, or	3
definitely not?	4
REFUSED	-7
DON'T KNOW	-8

IP-18. Before we talked today, had you ever thought about joining the military?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

[GO TO BEHAVIORS MODULE]

BE-1A. Have you ever talked with any military recruiter to get information about the military?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

BE-1. In the <u>past six months</u>, have you talked with anyone about possibly joining the Army?

YES	1	(BE-2)
NO	2	(BE-10)
REFUSED	-7	(BE-10)
DON'T KNOW	-8	(BE-10)

BE-2. With whom have you talked? [RECORD ALL THAT APPLY]

FRIENDS	01
MOTHER	02
FATHER	03
A BROTHER OR SISTER	04
SOME OTHER RELATIVE	05
(BOY/GIRL) FRIEND OR SPOUSE	06
A TEACHER	07
A COUNSELOR AT SCHOOL	08
A RECRUITER	09
CO-WORKER	10
EMPLOYER	11
OTHERS	12
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #BE1: WERE FRIENDS MENTIONED?
[BE-2 = 01]

YES	1	(BE-3)
NO	2	(CATI CHECK #BE2)

BE-3. You mentioned talking with friends. (Were these friends) from school?

YES	1
NO	2

BE-4. (Were these friends) At work?

YES	1
NO	2

BE-5 (Were these friends) In the service?

YES 1 (BE-6)
NO ..... 2 (CATI CHECK #BE2)

BE-6 (Were these friends) In the Army?

YES 1
NO 2

CATI CHECK #BE2: WAS RECRUITER MENTIONED?
[BE-2 = 09]

YES 1 (BE-8)
NO 2 (BE-7)

BE-7. In the <u>past six months</u>, have you talked to an Armed Forces recruiter about military service?

YES 1 (BE-8)
NO 2 (BE-10)
REFUSED ..... -7 (BE-10)
DON'T KNOW ..... -8 (BE-10)

BE-8. Was the recruiter you spoke with an:

	YES		NO	REF	DK
Army recruiter?	1	(BE-8A)	2	-7	-8
Air Force recruiter?	1	(BE-10)	2	-7	-8
Navy recruiter?	1	(BE-10)	2	-7	-8
Marine recruiter?	1	(BE-10)	2	-7	-8

BE-8A. How did you have your first contact with the Army recruiter?

Did you contact the Army recruiter on the advice of another Service recruiter	1
(Did you) contact the Army recruiter first	2
Were you contacted by the Army recruiter first	3
(Were you) with a friend with whom the recruiter was meeting	4
Did you contact the Army recruiter through a US Army Reserve or National Guard unit or member, or	5
Was your first contact by some other way	6
REFUSED	-7
DON'T KNOW	-8

BE-8B. Under what circumstances did you first talk with an Army recruiter? Did you talk:

By telephone	1
At a recruiting station	2
At a job fair	3
At school	4
At an Army Reserve unit, or	5
Some other way	6
REFUSED	-7
DON'T KNOW	-8

BE-10. In the past six months, have you responded to an Army ad by calling a toll-free number or sending for a gift?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

BE-11. In the past six months, have you visited an Army recruiting station?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

BE-12. In the past six months, have you taken a written test used for the Army, such as the Armed Services Vocational Aptitude Battery?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #BE3: IS RESPONDENT CURRENTLY IN COLLEGE OR A COLLEGE GRADUATE?
[SC-15 OR SC-29 = 2 OR 3 OR IF EE-1 > 09]

YES ..... 1 (CATI CHECK #BE4)
NO 2 (BE-16)

BE-16. In the past six months have you given any thought to going to college?

YES	1	(BE-17)
NO	2	(CATI CHECK #BE4)
REFUSED	-7	(BE-17)
DON'T KNOW	-8	(BE-17)

BE-17. In the past six months, have you talked to anyone about going to college?

YES	1	(BE-18)
NO	2	(BE-21)
REFUSED	-7	(BE-21)
DON'T KNOW	-8	(BE-21)

BE-18. With whom have you talked? [RECORD ALL THAT APPLY]

FRIENDS	01
MOTHER	02
FATHER	03
A BROTHER OR SISTER	04
SOME OTHER RELATIVE	05
(BOY/GIRL) FRIEND OR SPOUSE	06
A TEACHER	07
A COUNSELOR AT SCHOOL	08
A RECRUITER	09
CO-WORKER	10
EMPLOYER	11
OTHERS	12
REFUSED	-7
DON'T KNOW	-8

BE-19. Have they talked to you about:

	YES	NO	REF	DK
The Army College Fund	1	2	-7	-8
The GI Bill	1	2	-7	-8
ROTC Scholarships	1	2	-7	-8
VEAP (Veterans Educational ... Assistance Package)	1	2	-7	-8

BE-21. In the <u>past six months</u>, have you taken any college admissions tests, for example, the PSAT, SAT, or ACT?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

BE-24. In the <u>past six months</u>, have you submitted a college application?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #BE4: IS YOUTH CURRENTLY EMPLOYED FULL-TIME?
[EE-16 = 1 AND EE-19 >34]

YES ..... 1 (SOCIAL INFLUENCE MODULE)
NO 2 (BE-25)

BE-25. In the <u>past six months</u>, have you given any thought to getting a <u>full-time civilian</u> job?

YES 1 (BE-26)
NO ..... 2 (SOCIAL INFLUENCE MODULE)
REFUSED ..... -7 (BE-26)
DON'T KNOW ..... -8 (BE-26)

BE-26. In the <u>past six months</u>, have you spoken with anyone about getting a full-time civilian job?

YES 1 (BE-27)
NO 2 (BE-31)
REFUSED ..... -7 (BE-31)
DON'T KNOW ..... -8 (BE-31)

BE-27. With whom have you spoken? [RECORD ALL THAT APPLY]

FRIENDS	01
MOTHER	02
FATHER	03
A BROTHER OR SISTER	04
SOME OTHER RELATIVE	05
(BOY/GIRL) FRIEND OR SPOUSE	06
A TEACHER	07
A COUNSELOR AT SCHOOL	08
A RECRUITER	09
CO-WORKER	10
EMPLOYER	11
OTHERS	12
REFUSED	-7
DON'T KNOW	-8

BE-31. In the <u>past six months</u>, have you visited any prospective employers or employment agencies?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

BE-32. In the <u>past six months</u>, have you applied for any civilian jobs?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

[GO TO SOCIAL INFLUENCE MODULE]

INTRODUCTION: Now I am going to ask you a few questions about the attitudes of your family and friends about the military.

SI-1. For each of the following people, please tell me how you think they would feel about your enlisting in the Army. Use a scale of 1 to 5 where a 1 means they would think it is a very bad idea, 2 means its a bad idea, 3 means its neither a good nor a bad idea, 4 means its a good idea, and a 5 means they would think it is a very good idea.

[CODE 6 IF NOT APPLICABLE-PERSON DECEASED, DOES NOT EXIST]

1 = VERY BAD
2 = BAD
3 = NEUTRAL
4 = GOOD
5 = VERY GOOD

						NA	REF	DK
Your father	1	2	3	4	5	6	-7	-8
Your mother	1	2	3	4	5	6	-7	-8
Friends with Army experience	1	2	3	4	5	6	-7	-8
Friends with other military experience	1	2	3	4	5	6	-7	-8
Friends with no military experience	1	2	3	4	5	6	-7	-8
Your school counselor	1	2	3	4	5	6	-7	-8
Your teachers	1	2	3	4	5	6	-7	-8
Your co-workers ...	1	2	3	4	5	6	-7	-8
Your fellow students	1	2	3	4	5	6	-7	-8
Your employer	1	2	3	4	5	6	-7	-8

SI-2. Do you have friends who are currently serving in the military?

YES	1	(SI-3)
NO	2	(SI-5)
REFUSED	-7	(SI-5)
DON'T KNOW	-8	(SI-5)

SI-3. In what branch of the military are these friends serving? [CODE ALL THAT APPLY]

AIR FORCE	1
ARMY	2
COAST GUARD	3
MARINE CORPS	4
NAVY	5
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #SI1:	FRIENDS IN ARMY? [SI-3 = 2] YES ..... 1 (SI-4) NO 2 (SI-5)

SI-4. Are your friends in the Army serving in the:

	YES	NO	REF	DK
Active Army	1	2	-7	-8
Army Reserve	1	2	-7	-8
Army National Guard, or ..	1	2	-7	-8
Army Reserve Officer's Training Corps?	1	2	-7	-8

SI-5. Do you have family members who are currently serving in the military?

YES	1	(SI-6)
NO	2	(IMPORTANCE MODULE)
REFUSED	-7	(IMPORTANCE MODULE)
DON'T KNOW	-8	(IMPORTANCE MODULE)

SI-6. In what branch of the military are these family members serving? (CODE ALL THAT APPLY)

AIR FORCE	1
ARMY	2
COAST GUARD	3
MARINE CORPS	4
NAVY	5
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #SI2:	FAMILY IN ARMY? [SI-6 = 2] YES ..... 1 (SI-7) NO ..... 2 (IMPORTANCE MODULE)

SI-7. Are they serving in the:

	YES	NO	REF	DK
Active Army	1	2	-7	-8
Army Reserve	1	2	-7	-8
Army National Guard, or ..	1	2	-7	-8
Army Reserve Officer's Training Corps?	1	2	-7	-8

[GO TO IMPORTANCE MODULE]

IA-1. In thinking about your plans for the next year, please tell me how important it is that you have opportunities for the following things?

Use a scale of 1 to 5 where a "1" means it is not at all important and "5" means it is very important.

	NOT IMP				VERY IMP	REF	DK
a. Having a physical challenge?	1	2	3	4	5	-7	-8
b. Working with highly trained people?	1	2	3	4	5	-7	-8
d. Earning money for college or vocational school?	1	2	3	4	5	-7	-8
e. Training in useful skill areas?	1	2	3	4	5	-7	-8
g. Developing self-confidence?	1	2	3	4	5	-7	-8
h. Serving your country?	1	2	3	4	5	-7	-8
j. Developing leadership skills?	1	2	3	4	5	-7	-8
l. A chance to work with the latest high-tech equipment?	1	2	3	4	5	-7	-8
o. Having experiences you can be proud of?	1	2	3	4	5	-7	-8
p. Developing your potential?	1	2	3	4	5	-7	-8
q. Helping your career development?	1	2	3	4	5	-7	-8
y. Serving your own in community?	1	2	3	4	5	-7	-8
z. Having weekend excitement?	1	2	3	4	5	-7	-8
aa. Staying in your own hometown?	1	2	3	4	5	-7	-8
af. A stepping stone between high school and college?	1	2	3	4	5	-7	-8
ah. Becoming more mature and responsible?	1	2	3	4	5	-7	-8
ai. The opportunity to make changes and use your own judgment?	1	2	3	4	5	-7	-8
aj. Having a mental challenge?	1	2	3	4	5	-7	-8

[SKIP TO MEDIA HABITS MODULE]

MH-1. Do you regularly watch TV?

YES	1	(MH-2)
NO	2	(MH-14)
REFUSED	-7	(MH-2)
DON'T KNOW	-8	(MH-2)

MH-2. How many hours per week do you spend watching..

b. Programs on commercial networks such as ABC, CBS, or NBC? _____ # HOURS

a. Programs on commercial cable stations such as ESPN, MTV, USA, or TBS? _____ # HOURS

CATI CHECK #MH1: IS CABLE OR SUBSCRIPTION TV WATCHED? [MH-2b > 0]

YES 1 (MH-11)
NO 2 (MH-12)

MH-11. Do you watch any of the following Cable or Subscription TV channels regularly?

	YES	NO	REF	DK
MTV?	1	2	-7	-8
Nashville Network [TNN]?	1	2	-7	-8
ESPN [Sports]?	1	2	-7	-8
WTBS [Syndicated]?	1	2	-7	-8
Black Entertainment TV [BET]?	1	2	-7	-8

MH-12. Do you frequently watch any of the following types of TV shows?

	YES	NO	REF	DK
Sports?	1	2	-7	-8
Suspense or mystery?	1	2	-7	-8
General drama?	1	2	-7	-8
Music or music video?	1	2	-7	-8
Situation comedy?	1	2	-7	-8
TV movies?	1	2	-7	-8
Talk shows?	1	2	-7	-8

MH-13. Please tell me if you watch any of the following TV shows?

	YES	NO	REF	DK
David Letterman?	1	2	-7	-8
Friday Night Videos?	1	2	-7	-8
Monday Night Football?	1	2	-7	-8
College Football?	1	2	-7	-8
Sunday Night at the Movies?	1	2	-7	-8

MH-14. Does your household have a Video Cassette Recorder (VCR)?

YES	1	(MH-15)
NO	2	(MH-16)
REFUSED	-7	(MH-16)
DON'T KNOW	-8	(MH-16)

MH-15. How many hours per week do you usually spend watching your VCR?

_____
HOURS

MH-16. Now let's talk about radio listening. Do you regularly listen to the radio?

YES	1	(MH-17)
NO	2	(MH-28)
REFUSED	-7	(MH-28)
DON'T KNOW	-8	(MH-28)

MH-17. How many hours per week do you listen to ..

a. AM Radio? _____ # HOURS

b. FM Radio? _____ # HOURS

MH-26. Do you frequently listen to any of the following types of radio programs?

	YES	NO	REF	DK
News?	1	2	-7	-8
Classical music?	1	2	-7	-8
Pop?	1	2	-7	-8
Country?	1	2	-7	-8
Sports?	1	2	-7	-8
Talk Shows?	1	2	-7	-8
Rock & Roll?	1	2	-7	-8
"Easy Listening"?	1	2	-7	-8

MH-27. Do you listen to the following programs?

	YES	NO	REF	DK
American Top 40?	1	2	-7	-8
King Biscuit Flower Hour?	1	2	-7	-8
Rick Dees' Top 40?	1	2	-7	-8
Metalshop?	1	2	-7	-8
Rockline?	1	2	-7	-8

MH-28. How often do you read the newspaper? Is it...

never,	1	(MH-31)
less than twice a week,	2	(MH-29)
2-3 times per week,	3	(MH-29)
4-5 times per week, or	4	(MH-29)
daily?	5	(MH-29)
REFUSED	-7	(MH-31)
DON'T KNOW	-8	(MH-31)

MH-29. How many hours do you spend reading the newspaper each week?

_____
HOURS

MH-30. Do you regularly read any of the following sections?

	YES	NO	REF	DK
Sports?	1	2	-7	-8
Comics?	1	2	-7	-8
News?	1	2	-7	-8
Local?	1	2	-7	-8
Food?	1	2	-7	-8
Lifestyle?	1	2	-7	-8
CLassified?	1	2	-7	-8

MH-31. Finally, I would like to discuss magazine readership. Do you regularly read magazines?

YES	1	(MH-32)
NO	2	(RECALL MODULE)
REFUSED	-7	(RECALL MODULE)
DON'T KNOW	-8	(RECALL MODULE)

MH-32. What magazines do you read on a regular basis, that is, those that you have read at least 3 of the past 4 issues?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
REFUSED ..... -7
DON'T KNOW ..... -8

MH-33. About how many hours a week do you spend reading magazines?

_____
HOURS

[GO TO KNOWLEDGE-RECALL MODULE]

KR-1. Now, thinking about TV, radio, newspapers, magazines, and any other sources of advertising, for what military service or services do you recall seeing or hearing any advertising? (PROBE: Any other services?) [RECORD ALL THAT APPLY.]

NONE	0	(KR-5)
AIR FORCE	1	(CATI CHECK #KR5)
ARMY	2	(CATI CHECK #KR6)
RESERVE OFFICER'S TRAINING CORPS, or R.O.T.C.	3	(CATI CHECK #KR1)
NATIONAL GUARD	4	(CATI CHECK #KR2)
RESERVE	5	(CATI CHECK #KR3)
COAST GUARD	6	(CATI CHECK #KR10)
MARINE CORPS	7	(CATI CHECK #KR11)
NAVY	8	(CATI CHECK #KR12)
ONE AD FOR ALL SERVICES	9	(CATI CHECK #KR4)
REFUSED	-7	(KR-5)
DON'T KNOW	-8	(KR-5)

CATI CHECK #KR1: WAS R.O.T.C. MENTIONED?
[KR-1 = 3]
YES 1 (KR-2)
NO ..... 2 (CATI CHECK #KR2)

KR-2. You mentioned seeing or hearing advertising for the Reserve Officer's Training Corps. For which military service or services was this advertising? [RECORD ALL THAT APPLY]

AIR FORCE	1
ARMY	2
NAVY	3
MARINE CORPS	4
COAST GUARD	5
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KR2: WAS NATIONAL GUARD MENTIONED?
[KR-1 = 4]
YES 1 (KR-3)
NO ..... 2 (CATI CHECK #KR3)

KR-3. You mentioned seeing or hearing advertising for the National Guard. For which military service or services was this advertising? [RECORD ALL THAT APPLY]

AIR FORCE	1
ARMY	2
NAVY	3
MARINE CORPS	4
COAST GUARD	5
REFUSED	-7
DON'T KNOW	-8

CATI.CHECK #KR3: WAS RESERVE MENTIONED?
[KR-1 = 5]

YES 1 (KR-4)
NO ..... 2 (CATI CHECK #KR4)

KR-4. You mentioned seeing or hearing advertising for the Reserve. For which military service or services was this advertising? [RECORD ALL THAT APPLY]

AIR FORCE	1
ARMY	2
NAVY	3
MARINE CORPS	4
COAST GUARD	5
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KR4: DID RESPONDENT RECALL ALL INDIVIDUAL ADS AND ONE AD FOR ALL SERVICES?
[KR-1 = 1 THROUGH 9

YES 1 (KR-14)
NO ..... 2 (CATI CHECK #KR5)

#KR5: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE AIR FORCE?
[KR-1 = 1]

YES ..... 1 (CATI CHECK #KR6)
NO 2 (KR-5)

KR-5. Do you recall seeing or hearing any advertising for the Air Force?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KR6: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE ARMY?
[KR-1 = 2]

YES ..... 1 (CATI CHECK #KR7)
NO 2 (KR-6)

KR-6. [Do you recall seeing or hearing any advertising for] The Army?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR7: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE ARMY R.O.T.C.?
[KR-2 = 2]

YES ..... 1 (CATI CHECK #KR8)
NO 2 (KR-7)

KR-7. [Do you recall seeing or hearing any advertising for] The Army Reserve Officer's Training Corps, that is, the Army R.O.T.C?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR8: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE ARMY NATIONAL GUARD?
[KR-3 = 2]

YES ..... 1 (CATI CHECK #KR9)
NO 2 (KR-8)

KR-8. [Do you recall seeing or hearing any advertising for] The Army National Guard?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR9: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE ARMY RESERVE?
[KR-4 = 2]

YES ..... 1 (CATI CHECK #KR10)
NO 2 (KR-9)

KR-9. [Do you recall seeing or hearing any advertising for] The Army Reserve?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR10: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE COAST GUARD?
[KR-1 = 6]

YES ..... 1 (CATI CHECK #KR11)
NO 2 (KR-10)

KR-10. [Do you recall seeing or hearing any advertising for] The Coast Guard?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR11: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE MARINE CORPS?
[KR-1 = 7]

YES ..... 1 (CATI CHECK #KR12)
NO 2 (KR-11)

KR-11. [Do you recall seeing or hearing any advertising for] The Marine Corps?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR12: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE NAVY?
[KR-1 = 8]

YES ..... 1 (CATI CHECK #KR13)
NO 2 (KR-12)

KR-12. [Do you recall seeing or hearing any advertising for] The Navy?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR13: DID RESPONDENT RECALL SEEING OR HEARING ONE AD FOR ALL THE SERVICES?
[KR-1 = 9]

YES ..... 1 (CATI CHECK #KR14)
NO 2 (KR-13)

KR-13. [Do you recall seeing or hearing any advertising for] All the services in one ad?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR14: DID RESPONDENT RECALL SEEING OR HEARING ARMY OR ARMY COMPONENT AD?
[KR-1 = 2], OR
[KR-2, OR KR-3 OR KR-4 = 2] OR
[KR-6, OR KR-7, OR KR-8, OR KR-9 = 1]

YES 1 (KR-14)
NO ..... 2 (CATI CHECK #KR15)

KR-14. Did you see or hear Army ads...

	YES	NO	REF	DK
On TV?	1	2	-7	-8
On the radio?	1	2	-7	-8
In magazines?	1	2	-7	-8
In newspapers?	1	2	-7	-8
On billboards?	1	2	-7	-8
Through the mail?	1	2	-7	-8
On posters?	1	2	-7	-8
In brochures or pamphlets?	1	2	-7	-8
In the Yellow Pages?	1	2	-7	-8
Somewhere else?	1	2	-7	-8

CATI CHECK #KR15: DID RESPONDENT RECALL SEEING OR HEARING AN ARMY AD (UNAIDED OR AIDED)?
[KR-1 = 2 OR KR-6 = 1]

YES 1 (KR-15)
NO ..... 2 (CATI CHECK #KR16)

KR-15. Other than trying to get you to enlist, what was the main message you got from Army advertising?

[VERBATIM RESPONSES RECORDED]

CATI CHECK #KR16: DID RESPONDENT RECALL ANY ADS OTHER THAN THE ARMY AD?
[KR-1 = 1, 3, 4, 5, 6, 7, 8 OR 9] OR
[KR-5, OR KR-7, OR KR-8, OR KR-9, OR KR-10, OR KR-11, OR KR-12, OR KR-13 = 1]

YES ..... 1 (CATI CHECK #KR17)
NO ..... 2 (ATTITUDES MODULE)

#KR17: RANDOMLY SELECT SERVICE OR SERVICE COMPONENT OR JOINT SERVICES AD FROM THOSE RECALLED (OTHER THAN ARMY)

KR-17. Other than trying to get you to enlist, what was the main message you got from (SERVICE/SERVICE COMPONENT) advertising?

[VERBATIM RESPONSES RECORDED]

[GO TO ATTITUDES MODULE]

CATI CHECK #AT1: DID RESPONDENT RECALL SEEING OR HEARING ARMY ADS?
[KR-1 = 2 OR KR-6 = 1]

YES 1 (AT-1)
NO ..... 2 (SLOGAN MODULE)

AT-1. Use a scale of "1" to "5" where "1" means you do not like the advertising and "5" means you like the advertising very much.

Overall, how much do you like the Army ads you have seen or heard over the past year?

DO NOT LIKE	1
SOMEWHAT DISLIKE	2
NEUTRAL	3
LIKE SOMEWHAT	4
LIKE VERY MUCH	5
REFUSED	-7
DON'T KNOW	-8

AT-2. Use a scale of "1" to "5" where "1" means you do not believe the advertising and "5" means you believe the advertising very much.

How much do you believe what the ads say?

DO NOT BELIEVE	1
SOMEWHAT DISBELIEVE	2
NEUTRAL	3
BELIEVE SOMEWHAT	4
STRONGLY BELIEVE	5
REFUSED	-7
DON'T KNOW	-8

[GO TO SLOGAN RECOGNITION MODULE]

CATI CHECK #KS1: RANDOMIZE SERVICES (ARMY, AIR FORCE, MARINE CORPS, NAVY) FOR LISTING IN KS-1

KS-1. I am going to mention some slogans used by the military in its advertising. After I read each slogan, please tell me whether it is used by the (RANDOMIZED LIST OF SERVICES), or by all four active duty services together in the same ad or commercial.

KS-2. Which military service uses the advertising slogan, "Blank. It's not just a job. It's an adventure."?

AIR FORCE	1
ARMY	2
MARINE CORPS	3
NAVY	4
ALL FOUR SERVICES IN SAME AD	5
REFUSED	-7
DON'T KNOW	-8

KS-3. [Which military service uses the advertising slogan,] "The Few. The Proud. The Blank."?

AIR FORCE	1
ARMY	2
MARINE CORPS	3
NAVY	4
ALL FOUR SERVICES IN SAME AD	5
REFUSED	-7
DON'T KNOW	-8

KS-4. [Which military service uses the advertising slogan,] "Be all you can be."?

AIR FORCE	1
ARMY	2
MARINE CORPS	3
NAVY	4
ALL FOUR SERVICES IN SAME AD	5
REFUSED	-7
DON'T KNOW	-8

KS-5. [Which military service uses the advertising slogan,] "Blank, a great way of life."?

AIR FORCE	1
ARMY	2
MARINE CORPS	3
NAVY	4
ALL FOUR SERVICES IN SAME AD	5
REFUSED	-7
DON'T KNOW	-8

KS-6. [Which military service uses the advertising slogan,] "We're looking for a few good men."?

AIR FORCE	1
ARMY	2
MARINE CORPS	3
NAVY	4
ALL FOUR SERVICES IN SAME AD	5
REFUSED	-7
DON'T KNOW	-8

KS-7. [Which military service uses the advertising slogan,] "It's a great place to start."?

AIR FORCE	1
ARMY	2
MARINE CORPS	3
NAVY	4
ALL FOUR SERVICES IN SAME AD	5
REFUSED	-7
DON'T KNOW	-8

KS-8. [Which military service uses the advertising slogan,] "Aim high. Blank."?

AIR FORCE	1
ARMY	2
MARINE CORPS	3
NAVY	4
ALL FOUR SERVICES IN SAME AD	5
REFUSED	-7
DON'T KNOW	-8

KS-9. [Which military service uses the advertising slogan,] "We're not a company, we're your country."?

AIR FORCE	1
ARMY	2
MARINE CORPS	3
NAVY	4
ALL FOUR SERVICES IN SAME AD	5
REFUSED	-7
DON'T KNOW	-8

[GO TO PERCEPTIONS MODULE]

PE-1. I am going to read you a list of statements describing different things the Army might offer. Please tell me how much you disagree or agree that the Army offers each item on the list. A "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

	DS				AG	REF	DK
The Army offers...							
A. a wide variety of opportunities to find a job you can enjoy?	1	2	3	4	5	-7	-8
B. a physically challenging environment?	1	2	3	4	5	-7	-8
C. an experience you can be proud of?	1	2	3	4	5	-7	-8
D. an advantage over going right from high school to college?	1	2	3	4	5	-7	-8
E. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
F. the chance to work with the latest high tech equipment?	1	2	3	4	5	-7	-8
G. a great value in your civilian career development?	1	2	3	4	5	-7	-8
H. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
I. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
J. a mentally challenging experience?	1	2	3	4	5	-7	-8
K. an opportunity for you to become more mature and responsible?	1	2	3	4	5	-7	-8
L. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
M. many chances to work with highly trained people?	1	2	3	4	5	-7	-8
N. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8

CATI CHECK #PE2: RANDOMLY SELECT A CAREER OPTION FROM ARMY RESERVE, ARMY NATIONAL GUARD, AIR FORCE, NAVY, MARINE CORPS, GOING TO COLLEGE, WORKING IN A FULL-TIME CIVILIAN JOB, ALL SERVICES.

#PE3: WHICH CAREER OPTION WAS SELECTED?

ARMY RESERVE	1	(PE-1A)
ARMY NATIONAL GUARD	2	(PE-4A)
AIR FORCE	3	(PE-6)
NAVY	4	(PE-6)
MARINE CORPS	5	(PE-6)
ALL SERVICES	6	(PE-6)
WORKING IN A FULL-TIME CIVILIAN JOB	7	(PE-7)
GOING TO COLLEGE	8	(PE-8)

PE-1A. Have you ever heard of the United States Army Reserve?

YES	1	(PE-4)
NO	2	(PE-4A)
REFUSED	-7	(PE-4A)
DON'T KNOW	-8	(PE-4)

PE-4. Now, I am going to read you a list of things the United States Army Reserve might offer. Please tell me how much you disagree or agree that the United States Army Reserve offers each item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

The United States Army Reserve offers:

	DS				AG	REF	DK
A. a wide variety of opportunities to find a job you can enjoy?	1	2	3	4	5	-7	-8
B. an experience you can be proud of?	1	2	3	4	5	-7	-8
C. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
D. a great value in your civilian career development?	1	2	3	4	5	-7	-8
E. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
F. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
G. a mentally challenging experience?	1	2	3	4	5	-7	-8
H. the opportunity to become more mature and responsible?	1	2	3	4	5	-7	-8
I. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
J. many chances to work highly trained people?	1	2	3	4	5	-7	-8
K. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8
L. an opportunity to serve America while staying in your own home?	1	2	3	4	5	-7	-8
M. a chance to serve your own community?	1	2	3	4	5	-7	-8
N. interesting and exciting weekends?	1	2	3	4	5	-7	-8

[SKIP TO PE-12]

PE-4A. Have you ever heard of the United States Army National Guard?

YES	1	(PE-5)
NO	2	(PE-12)
REFUSED	-7	(PE-6)
DON'T KNOW ...	-8	(PE-12)

PE-5. Now, I am going to read you a list of statements describing different things the United States Army National Guard might offer. Please tell me how much you disagree or agree that the United States Army National Guard offers each item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

The Army National Guard offers:

	DS				AG	REF	DK
A. a wide variety of opportunities to find a job you can enjoy?	1	2	3	4	5	-7	-8
B. an experience you can be proud of?	1	2	3	4	5	-7	-8
C. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
D. a great value in your civilian career development?	1	2	3	4	5	-7	-8
E. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
F. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
G. a mentally challenging experience?	1	2	3	4	5	-7	-8
H. an opportunity to become more mature and responsible?	1	2	3	4	5	-7	-8
I. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
J. many chances to work with highly trained people?	1	2	3	4	5	-7	-8
K. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8
L. an opportunity to serve America while staying in your own home?	1	2	3	4	5	-7	-8
M. a chance to serve your own community?	1	2	3	4	5	-7	-8
N. gives you interesting and exciting weekends?	1	2	3	4	5	-7	-8

[SKIP TO PE-12]

PE-6. I am going to read you a list of statements describing different things the (SERVICE) might offer. Please tell me how much you disagree or agree that the (SERVICE) offers item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

The (SERVICE) offers:

	DS				AG	REF	DK
A. a wide variety of opportunities to find a job you can enjoy?	1	2	3	4	5	-7	-8
B. a physically challenging environment?	1	2	3	4	5	-7	-8
C. an experience you can be proud of?	1	2	3	4	5	-7	-8
D. an advantage over going right from high school to college?	1	2	3	4	5	-7	-8
E. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
F. the chance to work with the latest high tech equipment?	1	2	3	4	5	-7	-8
G. a great value in your civilian career development?	1	2	3	4	5	-7	-8
H. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
I. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
J. a mentally challenging experience?	1	2	3	4	5	-7	-8
K. an opportunity to become more mature and responsible?	1	2	3	4	5	-7	-8
L. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
M. many chances to work with highly trained people?	1	2	3	4	5	-7	-8
N. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8

[SKIP TO PE-12]

PE-7. I am going to read you a list of statements describing different things working in a full-time civilian job might offer. Please tell me how much you disagree or agree that working in a full-time civilian job offers each item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

Working in a full-time civilian job offers:

	DS				AG	REF	DK
A. a physically challenging environment?	1	2	3	4	5	-7	-8
B. an experience you can be proud of?	1	2	3	4	5	-7	-8
C. an advantage over going right from high school to college?	1	2	3	4	5	-7	-8
D. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
E. the chance to work with the latest high tech equipment?	1	2	3	4	5	-7	-8
F. a great value in your civilian career development?	1	2	3	4	5	-7	-8
G. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
H. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
I. a mentally challenging experience?	1	2	3	4	5	-7	-8
J. the opportunity to become more more mature and responsible?	1	2	3	4	5	-7	-8
K. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
L. many chances to work with highly trained people?	1	2	3	4	5	-7	-8
M. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8

[SKIP TO PE-12]

PE-6. I am going to read you a list of statements describing different things going to college might offer. Please tell me how much you disagree or agree that going to college offers each item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

Going to college offers...

	DS				AG	REF	DK
A. an experience you can be proud of?	1	2	3	4	5	-7	-8
B. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
C. a great value in your civilian career development?	1	2	3	4	5	-7	-8
D. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
E. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
F. a mentally challenging experience?	1	2	3	4	5	-7	-8
G. the opportunity to become more mature and responsible?	1	2	3	4	5	-7	-8
H. many chances to work with highly trained people?	1	2	3	4	5	-7	-8

PE-12. Of the people who joined the Army in the last year, what proportion do you think are high school diploma graduates? Would you say...

less than one quarter, ... 1
about one quarter, ... 2
about one half, ... 3
about three quarters, or 4
almost all? 5
REFUSED ..... -7
DON'T KNOW ..... -8

PE-13. Of the people who joined the Army last year, what proportion do you think would score in the upper half of an intelligence test? Is it...

all of them,	1
three quarters of them,	2
half of them,	3
one quarter of them, or	4
none of them?	5
REFUSED	-7
DON'T KNOW	-8

PE-14. Of the people who joined the Army in the last year, what proportion do you think will get a college diploma either while they are in the Army or after they complete their Army service? Would you say...

less than one quarter,	1
about one quarter,	2
about one half,	3
about three quarters, or	4
almost all?	5
REFUSED	-7
DON'T KNOW	-8

PE-15. Do you think very many young (men/women) with backgrounds and plans for the future like (YOUTH) are joining the Army?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #PE1: IS YOUTH ROTC POTENTIAL?

YES 1 (PE-15A)
NO ..... 2 (KNOWLEDGE AWARENESS MODULE)

PE-15A. Have you ever heard of the Army Reserve Officer's Training Corps on a college campus?

YES	1	(PE-2)
NO	2	(KNOWLEDGE-AWARENESS MODULE)
REFUSED	-7	(KNOWLEDGE-AWARENESS MODULE)
DON'T KNOW	-8	(PE-2)

PE-2. Next, I will read you a few statements describing different things that the Army Reserve Officer's Training Corps on the college campus might offer. Please tell me how much you disagree or agree that being an officer offers each item on the list. A "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

The Army Reserve Officer's Training Corps on the college campus provides...

	DS				AG	REF	DK
A. leadership and management training?	1	2	3	4	5	-7	-8
B. the opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
C. a college elective that can be taken together with other college courses?	1	2	3	4	5	-7	-8
D. an officer's commission in the active Army, Army Reserve, or the Army National Guard?	1	2	3	4	5	-7	-8

PE-3. Being an officer in the United States Army means different things to different people. Please tell me how much you disagree or agree that being an officer offers each item on the list. A "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

Being an officer in the United States Army provides...

	DS				AG	REF	DK
A. a wide variety of job opportunities?	1	2	3	4	5	-7	-8
B. experiences you can be proud of?	1	2	3	4	5	-7	-8
C. the opportunity to use your college acquired skills?	1	2	3	4	5	-7	-8
D. the opportunity to make changes and use your own judgment?	1	2	3	4	5	-7	-8

[GO TO KNOWLEDGE-AWARENESS MODULE]

KA-7. Can you become eligible to earn money for college by enlisting in the Army?

YES	1	(KA-1)
NO	2	(CATI CHECK #KA4)
REFUSED	-7	(KA-1)
DON'T KNOW	-8	(KA-1)

KA-1. How much do you think can be earned through Army education benefits? [PROBE: This would be the total education benefits that could be earned while in the Army.]

UNDER $5,000	1
$5,000 TO $9,999	2
$10,000 TO $14,999	3
$15,000 TO $19,999	4
$20,000 TO $24,999	5
$25,000 OR MORE	6
REFUSED	-7
DON'T KNOW	-8

KA-2. Do you think Army education benefits would cover your entire college education?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

KA-3. Do you think Army education benefits are more, less or about the same as the Navy, Air Force, or Marines offer?

MORE	1
LESS	2
ABOUT THE SAME	3
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KA4: ROTATE ORDER OF SERVICES FOR KA-4

KA-4. Please tell me whether or not each of the following services offers the "GI Bill"?

	DOES OFFER	DOES NOT OFFER	REF	DK
Army	1	2	-7	-8
Air Force	1	2	-7	-8
Navy	1	2	-7	-8
Marines	1	2	-7	-8

KA-5. What is the minimum number of years that a new recruit has to serve on active duty in the Army?

_____
REFUSED ..... -7
DON'T KNOW ..... -8

KA-6. Is it possible to sign up for the Army and actually start serving up to one year later?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

KA-8. Are 17 year old high school juniors eligible to join the Army Reserve or Army National Guard?

YES 1 (KA-10)
NO 2 (KA-9)
REFUSED ..... -7 (KA-9)
DON'T KNOW ..... -8 (KA-9)

KA-9. Is high school graduation required before joining the Army Reserve or Army National Guard?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

KA-10. Who sponsors the "Scholar-Athlete Award Program"? Is it the...

Marine Corps, ... 1
National Guard, ... 2
Army Reserve, ... 3
Air Force,or 4
Navy? 5
REFUSED ..... -7
DON'T KNOW ..... -8

KA-11. Can qualified people who join the Army Reserve or Army National Guard receive money for college?

YES 1 (KA-12)
NO 2 (KA-13)
REFUSED ..... -7 (KA-12)
DON'T KNOW ..... -8 (KA-12)

KA-12. What is the maximum amount of money for college that qualified people who join the Army Reserve or Army National Guard can receive under the "GI Bill"?

UNDER $1,000	1
$1,000 TO $1,999	2
$2,000 TO $3,999	3
$4,000 TO $5,999	4
$6,000 TO $7,999	5
$8,000 TO $9,999	6
$10,000 OR MORE	7
REFUSED	-7
DON'T KNOW	-8

[GO TO DEMOGRAPHICS MODULE]

INTRODUCTION: Now I have some questions about your background.

CATI CHECK #DE1:	IS RESPONDENT HISPANIC? [SC-20 OR SC-34 = 1]
	YES ..... 1 (DE-5) NO 2 (DE-6)

DE-5. What is your ethnic background? Are you:

Mexican American	1
Puerto Rican, or	2
Some other Hispanic?	3
REFUSED	-7
DON'T KNOW	-8

DE-6. What is your current marital status? Are you:

Single, ...	1
Married, ...	2
Separated, ...	3
Divorced, or	4
Widowed?	5
REFUSED	-7
DON'T KNOW	-8

INTRODUCTION: Now I would like to ask some questions about your father and mother, or other adults in your household.

DE-14. (When not attending college) Do you live in the same household as one or both of your parents? (Please include any natural parents, step-parents or guardians.)

YES	1	(DE-15)
NO	2	(DE-16)
REFUSED	-7	(DE-16)
DON'T KNOW	-8	(DE-15)

DE-15. Which of your parents do you live with?

BOTH	1
MOTHER, STEP-MOTHER OR FEMALE GUARDIAN..	2
FATHER, STEP-FATHER OR MALE GUARDIAN....	3
REFUSED	-7
DON'T KNOW	-8

DE-16. Who is the principal wage earner in the household?

BOTH	1
MOTHER, STEP-MOTHER OR FEMALE GUARDIAN	2
FATHER, STEP-FATHER OR MALE GUARDIAN	3
OTHER	4
NO WAGE EARNER	5
REFUSED	-7
DON'T KNOW	-8

DE-19. What was the highest grade or level of education that your father completed?

LESS THAN 8TH GRADE	07
8TH GRADE	08
9TH GRADE	09
10TH GRADE	10
11TH GRADE	11
12TH GRADE	12
1ST YEAR OF 4-YEAR COLLEGE	13
2ND YEAR OF 4-YEAR COLLEGE	14
3RD YEAR OF 4-YEAR COLLEGE	15
4TH YEAR OF 4-YEAR COLLEGE	16
5TH YEAR COLLEGE/1ST YEAR GRADUATE OR PROFESSIONAL SCHOOL	17
2ND YEAR GRADUATE OR PROFESSIONAL SCHOOL	18
3RD YEAR GRADUATE OR PROFESSIONAL SCHOOL	19
MORE THAN 3 YEARS GRADUATE/ PROFESSIONAL SCHOOL	20
1ST YEAR OF JR. OR COMMUNITY COLLEGE	21
2ND YEAR OF JR. OR COMMUNITY COLLEGE	22
1ST YEAR OF VOCATIONAL, BUSINESS OR TRADE SCHOOL	23
2ND YEAR OF VOCATIONAL, BUSINESS OR TRADE SCHOOL	24
MORE THAN 2 YEARS VOCATIONAL, BUSINESS OR TRADE SCHOOL	25
REFUSED	-7
DON'T KNOW	-8

DE-20. Is your father now...

working full-time, ...	1	(DE-26)
working part-time, ...	2	(DE-26)
unemployed, ...	3	(DE-26)
retired, ...	4	(DE-26)
taking care of a family at home, or	5	(DE-26)
in the military?	6	(DE-21)
DECEASED	7	(DE-26)
OTHER	8	(DE-26)
REFUSED	-7	(DE-26)
DON'T KNOW	-8	(DE-26)

DE-21. In which branch of the military is your father currently serving?

AIR FORCE	1
ARMY	2
COAST GUARD	3
MARINES	4
NAVY	5
REFUSED	-7
DON'T KNOW	-8

DE-26. What was the highest grade or level of education that your mother completed?

LESS THAN 8TH GRADE	07
8TH GRADE	08
9TH GRADE	09
10TH GRADE	10
11TH GRADE	11
12TH GRADE	12
1ST YEAR OF 4-YEAR COLLEGE	13
2ND YEAR OF 4-YEAR COLLEGE	14
3RD YEAR OF 4-YEAR COLLEGE	15
4TH YEAR OF 4-YEAR COLLEGE	16
5TH YEAR COLLEGE/1ST YEAR GRADUATE OR PROFESSIONAL SCHOOL	17
2ND YEAR GRADUATE OR PROFESSIONAL SCHOOL	18
3RD YEAR GRADUATE OR PROFESSIONAL SCHOOL	19
MORE THAN 3 YEARS GRADUATE/ PROFESSIONAL SCHOOL	20
1ST YEAR OF JR. OR COMMUNITY COLLEGE	21
2ND YEAR OF JR. OR COMMUNITY COLLEGE	22
1ST YEAR OF VOCATIONAL, BUSINESS OR TRADE SCHOOL	23
2ND YEAR OF VOCATIONAL, BUSINESS OR TRADE SCHOOL	24
MORE THAN 2 YEARS VOCATIONAL, BUSINESS OR TRADE SCHOOL	25
REFUSED	-7
DON'T KNOW	-8

DE-27. Is your mother now...

working full-time,	1
working part-time,	2
unemployed,	3
retired, or	4
taking care of a family at home, or	5
in the military?	6
DECEASED	7
OTHER	8
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #DE1A: DOES RESPONDENT LIVE WITH PARENTS?
[DE-14 = 1] OR [DE-14 = DK OR REFUSED] AND DE-19 = DK OR REF AND DE-26 = DK OR REF

YES 1 (DE-36)
NO 2 (DE-17)

DE-17. What relationship to you is the head of household in the house or apartment you are living in?

BROTHER	1	(DE-19A)
SISTER	2	(DE-19A)
UNCLE	3	(DE-19A)
AUNT	4	(DE-19A)
GRANDFATHER	5	(DE-19A)
GRANDMOTHER	6	(DE-19A)
COUSIN	7	(DE-19A)
SPOUSE	8	(DE-19A)
NON-RELATIVE	9	(DE-19A)
RESPONDENT	10	(DE-36)
OTHER _____	91	(DE-18)
REFUSED	-7	(DE-19A)
DON'T KNOW	-8	(DE-19A)

DE-19A. What was the highest grade or level of education that (PERSON in DE-17) completed?

LESS THAN 8TH GRADE	07
8TH GRADE	08
9TH GRADE	09
10TH GRADE	10
11TH GRADE	11
12TH GRADE	12
1ST YEAR OF 4-YEAR COLLEGE	13
2ND YEAR OF 4-YEAR COLLEGE	14
3RD YEAR OF 4-YEAR COLLEGE	15
4TH YEAR OF 4-YEAR COLLEGE	16
5TH YEAR COLLEGE/1ST YEAR GRADUATE OR PROFESSIONAL SCHOOL	17
2ND YEAR GRADUATE OR PROFESSIONAL SCHOOL	18
3RD YEAR GRADUATE OR PROFESSIONAL SCHOOL	19
MORE THAN 3 YEARS GRADUATE/ PROFESSIONAL SCHOOL	20
1ST YEAR OF JR. OR COMMUNITY COLLEGE	21
2ND YEAR OF JR. OR COMMUNITY COLLEGE	22
1ST YEAR OF VOCATIONAL, BUSINESS OR TRADE SCHOOL	23
2ND YEAR OF VOCATIONAL, BUSINESS OR TRADE SCHOOL	24
MORE THAN 2 YEARS VOCATIONAL, BUSINESS OR TRADE SCHOOL	25
REFUSED	-7
DON'T KNOW	-8

DE-36. Did you ever participate in a Reserve Officer's Training Corps (ROTC) course?

YES	1	(DE-37)
NO	2	(DE-39)
REFUSED	-7	(DE-39)
DON'T KNOW	-8	(DE-39)

DE-37. Was that Junior ROTC in high school or Senior ROTC in college?

JUNIOR (IN HIGH SCHOOL)	1	(DE-39)
SENIOR (IN COLLEGE)	2	(DE-38)
REFUSED	-7	(DE-39)
DON'T KNOW	-8	(DE-39)

DE-38. Was that Army ROTC, Air Force ROTC or Navy ROTC?

ARMY	1
AIR FORCE	2
NAVY	3
REFUSED	-7
DON'T KNOW	-8

DE-39. What is the name of the county in which you live?

_____

REFUSED	-7
DON'T KNOW	-8

DE-40. What is the name of the city in which you live?

_____

REFUSED	-7
DON'T KNOW	-8

DE-41. What is your zip code?

_____

REFUSED	-7
DON'T KNOW	-8

DE-42. Now I need to record your Social Security Number. We are asking for this number for use in another study to determine if the ideas we have been discussing are related to whether or not someone enlists in a military service.

Let me remind you that your answers are voluntary and will be completely confidential. Under no circumstances will your identity be made know to anyone in the military.

DOES NOT HAVE SSN 0
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #DE2: IS YOUTH SELECTED FOR POTENTIAL INCLUSION IN LONGITUDINAL COMPONENT?

YES .... 1 (TRACKING MODULE)
NO ..... 2 (CATI CHECK #DE3)

#DE3: IS PARENT OF YOUTH TO BE SELECTED FOR PARTICIPATION IN THE INFLUENCER SAMPLE?

YES .... 1 (PARENTAL LOCATION MODULE)
NO ..... 2 (TERMINATION)

PL-1. We would like to interview your (PARENT) regarding (his/her) thoughts about future plans and possibilities for you. Please give me (his/her) name and telephone number.

_____
(NAME)

(___) (___) - (____)
AREA EXCHANGE LOCAL

PL-2. Think now about the possibility of joining the Armed Services in the future. How important is your (PARENT)'s advice in your decision about serving in the military. Is it...

very important, ... 1
somewhat important, ... 2
neither important nor unimportant,.. 3
somewhat unimportant, or..... 4
very unimportant? 5
REFUSED ..... -7
DON'T KNOW ..... -8

TERMINATION

INTRODUCTION: It is possible that we will call again sometime in the future to obtain some updated information from you. I'd like to ask you a few questions that will help us to recontact you at a later date.

TR-1. In what name is this phone number (AREA CODE & NUMBER) listed?

_____

NOT LISTED 0
REFUSED ..... -7
DON'T KNOW ..... -8

TR-2. If we were to recontact you one year from now, do you expect that we could reach you at this same telephone number?

YES 1 (TR-9)
NO 2 (TR-3)
REFUSED ..... -7 (TR-9)
DON'T KNOW ..... -8 (TR-9)

TR-3. Why is that?

MOVING 1 (TR-4)
NUMBER BEING CHANGED 2 (TR-6)
OTHER(SPECIFY) _____ 91 (TR-9)
REFUSED ..... -7 (TR-9)
DON'T KNOW ..... -8 (TR-9)

TR-4. When do you expect to be moving?

_____
(MM/YY)
REFUSED ..... -7
DON'T KNOW ..... -8

TR-5. To what address will you be moving?

STREET: _____

CITY: _____

STATE: _____

ZIP: _____
REFUSED ..... -7 (TR-7)
DON'T KNOW ..... -8 (TR-7)

TR-6. When do you expect your telephone number to be changed?

_____
(MM/YY)
REFUSED ..... -7
DON'T KNOW ..... -8

TR-7. Do you know what your new telephone number will be?

YES 1 (TR-8)
NO 2 (TR-9)
REFUSED ..... -7 (TR-9)

TR-8. What is that new number?

_____
REFUSED ..... -7
DON'T KNOW ..... -8

TR-9. Do you have a work telephone number where you could be contacted a year from now?

YES 1 (TR-10)
NO 2 (TR-12)
REFUSED ..... -7 (TR-12)
DON'T KNOW ..... -8 (TR-12)

TR-10. What is that number?

_____
REFUSED ..... -7
DON'T KNOW ..... -8

TR-11. What is your employer's name and address?

COMPANY NAME: _____

STREET: _____

CITY: _____

STATE: _____

ZIP: _____
REFUSED ..... -7
DON'T KNOW ..... -8

TR-12. Please give me the name, address and telephone number of two friends or family members who are most likely to know how to reach you a year from now.

NAME: _____

STREET: _____

CITY: _____

STATE: _____

ZIP: _____

PHONE: _____

TR-12A. [PROBE: And the second person's name, address, and telephone number?]

NAME: _____

STREET: _____

CITY: _____

STATE: _____

ZIP: _____

PHONE: _____
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #TR1	IS RESPONDENT A TARGET YOUTH?
	YES ..... 1 (PARENTAL LOCATION)
	NO ..... 2 (TERMINATE)

INTRODUCTION: I would like to ask you a few questions as the (father/mother) of (YOUTH'S NAME), about talks you may have had with (him/her) about (his/her) educational and job plans. By talks, we mean any kind of informal talking you and (YOUTH'S NAME) may have done concerning what (he/she) plans to do about education, jobs, or job preparation.

PI-2. How often have you had such discussions in the last 12 months? Was it...

never, ...	1	(PI-6)
rarely, ...	2	(PI-5)
occasionally, or	3	(PI-5)
often?	4	(PI-5)
REFUSED	-7	(PI-5)
DON'T KNOW	-8	(PI-5)

PI-5. During these talks, do you typically give your opinions or do you try to stay neutral?

GIVE OPINION	1
TRY TO STAY NEUTRAL	2
REFUSED	-7
DON'T KNOW	-8

PI-6. How much influence do you think you have had on (YOUTH'S NAME) plans for the future? Have you had:

a great deal of influence, ...	1
a considerable amount of influence, ...	2
some influence, ...	3
very little influence, or	4
no influence at all?	5
REFUSED	-7
DON'T KNOW	-8

PI-7. What would you like to see (YOUTH'S NAME) do in the future? Would you like (him/her) to:

Go to college, ...	1
Get training in a vocational or technical program, ...	2
Get a full-time job, ...	3
Join the Armed Services, ...	4
Get married and not work, or	5
Something else? (SPECIFY)_____ ..	91
REFUSED	-7
DON'T KNOW	-8

PI-8. For most young men, do you think service in the military is...

Definitely a good idea, ...	1
Probably a good idea, ...	2
Probably not a good idea, or.....	3
Definitely not a good idea?	4
REFUSED	-7
DON'T KNOW	-8

PI-9. For most young women, do you think service in the military is...

Definitely a good idea, ...	1
Probably a good idea, ...	2
Probably not a good idea, or	3
Definitely not a good idea?	4
REFUSED	-7
DON'T KNOW	-8

PI-10. Have you talked to (YOUTH'S NAME) about enlisting in the Armed Services?

YES	1	(PI-11)
NO	2	(PI-18)
REFUSED	-7	(PI-18)
DON'T KNOW	-8	(PI-18)

PI-11. How often have you talked about this?

NEVER	1	(PI-18)
RARELY	2	(PI-18)
OCCASIONALLY	3	(PI-14)
OFTEN	4	(PI-14)
REFUSED	-7	(PI-14)
DON'T KNOW	-8	(PI-14)

PI-14. Were these talks about entering as an officer, as an enlisted person, or both?

ENLISTED	1
OFFICER	2
BOTH	3
NEITHER	4
REFUSED	-7
DON'T KNOW	-8

PI-15. Which services have you talked about? [CODE ALL THAT APPLY]

	YES	NO	DK	REF
ARMY	1	2	-7	-8
NAVY	1	2	-7	-8
AIR FORCE	1	2	-7	-8
MARINE CORPS	1	2	-7	-8
ALL SERVICES IN GENERAL	1	2	-7	-8

PI-16. Have you talked about (YOUTH'S NAME) signing up for active duty, for the Reserve, or for the National Guard? (PROBES: The Reserve are people in all services who train once a week, or one weekend a month and a couple of weeks in the summer. The National Guard consists of Army and Air Force units which are under the control of the governor of the state; they also train just once a week, or one weekend a month, and a couple of weeks in the summer.) (CODE ALL THAT APPLY)

	YES	NO	DK	REF
ACTIVE DUTY	1	2	-7	-8
RESERVE	1	2	-7	-8
NATIONAL GUARD	1	2	-7	-8

PI-17. When you talk about military service, do you generally encourage, discourage, or stay neutral about (YOUTH'S NAME) enlisting?

ENCOURAGE	1
STAY NEUTRAL	2
DISCOURAGE	3
REFUSED	-7
DON'T KNOW	-8

PI-18. How much influence do you think you have had on (YOUTH'S NAME)'S plans about enlisting? Have you had:

a great deal of influence, ...	1
a considerable amount of influence, ...	2
some influence, ...	3
very little influence, or	4
no influence at all?	5
REFUSED	-7
DON'T KNOW	-8

PI-19. Have you pointed out ads for the services in the mass media?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

PI-21. Have you talked to your (son/daughter) about seeing a military recruiter?

YES	1	(PI-22)
NO	2	(PI-23)
REFUSED	-7	(PI-23)
DON'T KNOW	-8	(PI-23)

PI-22. Have you done this for the ....

	YES	NO	REF	DK
Army?	1	2	-7	-8
Navy?	1	2	-7	-8
Air Force?	1	2	-7	-8
Marines?	1	2	-7	-8

PI-23. Have you received military recruiting materials mailed to you or (YOUTH'S NAME) at your home address?

YES	1	(PI-24)
NO	2	(PI-25)
REFUSED	-7	(PI-25)
DON'T KNOW	-8	(PI-25)

PI-25. How likely is it that (YOUTH'S NAME) will enlist in the military in the next few years? Would you say that (he/she)..

definitely will	1	(PI-26)
probably will	2	(PI-26)
probably will not, or	3	(IMPORTANCE MODULE)
definitely will not	4	(IMPORTANCE MODULE)
REFUSED	-7	(IMPORTANCE MODULE)
DON'T KNOW	-8	(IMPORTANCE MODULE)

PI-26. Do you expect that (YOUTH'S NAME) will enter the military as an enlisted person or as an officer?

ENLISTED PERSON	1
OFFICER	2
REFUSED	-7
DON'T KNOW	-8

[GO TO IMPORTANCE OF ATTRIBUTES MODULE]

IA-2. In thinking about (YOUTH'S NAME)'s future, how important is it to you that (he/she) have opportunities for the following things?

Use a scale of 1 to 5 where a "1" means it is not at all important and "5" means it is very important.

	NOT IMP				VERY IMP	REF	DK
a. Having a physical challenge	1	2	3	4	5	-7	-8
b. Working with highly trained people	1	2	3	4	5	-7	-8
c. Earning money for college or vocational school	1	2	3	4	5	-7	-8
d. Training in useful skill areas ..	1	2	3	4	5	-7	-8
e. Developing self-confidence	1	3	3	4	5	-7	-8
f. Serving (his/her) country	1	2	3	4	5	-7	-8
g. Developing leadership skills	1	2	3	4	5	-7	-8
h. Working with the latest high tech equipment	1	2	3	4	5	-7	-8
i. Having experiences (he/she) can be proud of	1	2	3	4	5	-7	-8
j. Developing (his/her) potential ..	1	2	3	4	5	-7	-8
k. Helping (his/her) career development	1	2	3	4	5	-7	-8
l. Serving (his/her) own community?.	1	2	3	4	5	-7	-8
m. Having weekend excitement	1	2	3	4	5	-7	-8
n. Staying in (his/her) own hometown	1	2	3	4	5	-7	-8
o. Having a stepping stone between high school and college	1	2	3	4	5	-7	-8
p. Becoming more mature and responsible	1	2	3	4	5	-7	-8
q. The opportunity to make changes and use (his/her) own judgement.	1	2	3	4	5	-7	-8
r. Having a mental challenge	1	2	3	4	5	-7	-8

[SKIP TO MEDIA HABITS MODULE]

MH-1. Do you regularly watch TV?

YES	1	(MH-2)
NO	2	(MH-14)
REFUSED	-7	(MH-2)
DON'T KNOW	-8	(MH-2)

MH-2. How many hours per week do you spend watching..

b. Programs on commercial networks such as ABC, CBS, or NBC? _____ # HOURS

a. Programs on commercial cable stations such as ESPN, MTV, USA, or TBS? _____ # HOURS

CATI CHECK #MH1: IS CABLE OR SUBSCRIPTION TV WATCHED? [MH-2b > 0]

YES 1 (MH-11)
NO 2 (MH-12)

MH-11. Do you watch any of the following Cable or Subscription TV channels regularly?

	YES	NO	REF	DK
MTV?	1	2	-7	-8
Nashville Network [TNN]?	1	2	-7	-8
ESPN [Sports]?	1	2	-7	-8
WTBS [Syndicated]?	1	2	-7	-8
Black Entertainment TV [BET]?	1	2	-7	-8

MH-12. Do you frequently watch any of the following types of TV shows?

	YES	NO	REF	DK
Sports?	1	2	-7	-8
Suspense or mystery?	1	2	-7	-8
General drama?	1	2	-7	-8
Music or music video?	1	2	-7	-8
Situation comedy?	1	2	-7	-8
TV movies?	1	2	-7	-8
Talk shows?	1	2	-7	-8

MH-13. Please tell me if you watch any of the following TV shows?

	YES	NO	REF	DK
David Letterman?	1	2	-7	-8
Friday Night Videos?	1	2	-7	-8
Monday Night Football?	1	2	-7	-8
College Football?	1	2	-7	-8
Sunday Night at the Movies?	1	2	-7	-8

MH-14. Does your household have a Video Cassette Recorder (VCR)?

YES	1	(MH-15)
NO	2	(MH-16)
REFUSED	-7	(MH-16)
DON'T KNOW	-8	(MH-16)

MH-15. How many hours per week do you usually spend watching your VCR?

_____
HOURS

MH-16. Now let's talk about radio listening. Do you regularly listen to the radio?

YES	1	(MH-17)
NO	2	(MH-28)
REFUSED	-7	(MH-28)
DON'T KNOW	-8	(MH-28)

MH-17. How many hours per week do you listen to ..

a. AM Radio? _____ # HOURS

b. FM Radio? _____ # HOURS

MH-26. Do you frequently listen to any of the following types of radio programs?

	YES	NO	REF	DK
News?	1	2	-7	-8
Classical music?	1	2	-7	-8
Pop?	1	2	-7	-8
Country?	1	2	-7	-8
Sports?	1	2	-7	-8
Talk Shows?	1	2	-7	-8
Rock & Roll?	1	2	-7	-8
"Easy Listening"?	1	2	-7	-8

MH-27. Do you listen to the following programs?

	YES	NO	REF	DK
American Top 40?	1	2	-7	-8
King Biscuit Flower Hour?	1	2	-7	-8
Rick Dees' Top 40?	1	2	-7	-8
Metalshop?	1	2	-7	-8
Rockline?	1	2	-7	-8

MH-28. How often do you read the newspaper? Is it...

never, ...	1	(MH-31)
less than twice a week, ...	2	(MH-29)
2-3 times per week, ...	3	(MH-29)
4-5 times per week, or	4	(MH-29)
daily?	5	(MH-29)
REFUSED	-7	(MH-31)
DON'T KNOW	-8	(MH-31)

MH-29. How many hours do you spend reading the newspaper each week?

_____
HOURS

MH-30. Do you regularly read any of the following sections?

	YES	NO	REF	DK
Sports?	1	2	-7	-8
Comics?	1	2	-7	-8
News?	1	2	-7	-8
Local?	1	2	-7	-8
Food?	1	2	-7	-8
Lifestyle?	1	2	-7	-8
CLassified?	1	2	-7	-8

MH-31. Finally, I would like to discuss magazine readership. Do you regularly read magazines?

YES	1	(MH-32)
NO	2	(RECALL MODULE)
REFUSED	-7	(RECALL MODULE)
DON'T KNOW	-8	(RECALL MODULE)

MH-32. What magazines do you read on a regular basis, that is, those that you have read at least 3 of the past 4 issues?

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

REFUSED ..... -7
DON'T KNOW ..... -8

MH-33. About how many hours a week do you spend reading magazines?

_____
HOURS

[GO TO KNOWLEDGE-RECALL MODULE]

KR-1. Now, thinking about TV, radio, newspapers, magazines, and any other sources of advertising, for what military service or services do you recall seeing or hearing any advertising? (PROBE: Any other services?) [RECORD ALL THAT APPLY.]

NONE	0	(KR-5)
AIR FORCE	1	(CATI CHECK #KR5)
ARMY	2	(CATI CHECK #KR6)
RESERVE OFFICER'S TRAINING CORPS, or R.O.T.C.	3	(CATI CHECK #KR1)
NATIONAL GUARD	4	(CATI CHECK #KR2)
RESERVE	5	(CATI CHECK #KR3)
COAST GUARD	6	(CATI CHECK #KR10)
MARINE CORPS	7	(CATI CHECK #KR11)
NAVY	8	(CATI CHECK #KR12)
ONE AD FOR ALL SERVICES	9	(CATI CHECK #KR4)
REFUSED	-7	(KR-5)
DON'T KNOW	-8	(KR-5)

CATI CHECK #KR1: WAS R.O.T.C. MENTIONED?
[KR-1 = 3]
YES 1 (KR-2)
NO ..... 2 (CATI CHECK #KR2)

KR-2. You mentioned seeing or hearing advertising for the Reserve Officer's Training Corps. For which military service or services was this advertising? [RECORD ALL THAT APPLY]

AIR FORCE	1
ARMY	2
NAVY	3
MARINE CORPS	4
COAST GUARD	5
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KR2: WAS NATIONAL GUARD MENTIONED?
[KR-1 = 4]
YES 1 (KR-3)
NO ..... 2 (CATI CHECK #KR3)

KR-3. You mentioned seeing or hearing advertising for the National Guard. For which military service or services was this advertising? [RECORD ALL THAT APPLY]

AIR FORCE	1
ARMY	2
NAVY	3
MARINE CORPS	4
COAST GUARD	5
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KR3: WAS RESERVE MENTIONED?
[KR-1 = 5]

YES 1 (KR-4)
NO ..... 2 (CATI CHECK #KR4)

KR-4. You mentioned seeing or hearing advertising for the Reserve. For which military service or services was this advertising? [RECORD ALL THAT APPLY]

AIR FORCE	1
ARMY	2
NAVY	3
MARINE CORPS	4
COAST GUARD	5
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KR4: DID RESPONDENT RECALL ALL INDIVIDUAL ADS AND ONE AD FOR ALL SERVICES?
[KR-1 = 1 THROUGH 9

YES 1 (KR-14)
NO ..... 2 (CATI CHECK #KR5)

#KR5: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE AIR FORCE?
[KR-1 = 1]

YES ..... 1 (CATI CHECK #KR6)
NO 2 (KR-5)

KR-5. Do you recall seeing or hearing any advertising for the Air Force?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KR6: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE ARMY?
[KR-1 = 2]

YES ..... 1 (CATI CHECK #KR7)
NO 2 (KR-6)

KR-6. [Do you recall seeing or hearing any advertising for] The Army?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR7: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE ARMY R.O.T.C.?
[KR-2 = 2]

YES ..... 1 (CATI CHECK #KR8)
NO 2 (KR-7)

KR-7. [Do you recall seeing or hearing any advertising for] The Army Reserve Officer's Training Corps, that is, the Army R.O.T.C?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR8: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE ARMY NATIONAL GUARD?
[KR-3 = 2]

YES ..... 1 (CATI CHECK #KR9)
NO 2 (KR-8)

KR-8. [Do you recall seeing or hearing any advertising for] The Army National Guard?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR9: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE ARMY RESERVE?
[KR-4 = 2]

YES ..... 1 (CATI CHECK #KR10)
NO 2 (KR-9)

KR-9. [Do you recall seeing or hearing any advertising for] The Army Reserve?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR10: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE COAST GUARD?
[KR-1 = 6]

YES ..... 1 (CATI CHECK #KR11)
NO 2 (KR-10)

KR-10. [Do you recall seeing or hearing any advertising for] The Coast Guard?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR11: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE MARINE CORPS?
[KR-1 = 7]

YES ..... 1 (CATI CHECK #KR12)
NO 2 (KR-11)

KR-11. [Do you recall seeing or hearing any advertising for] The Marine Corps?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR12: DID RESPONDENT RECALL SEEING OR HEARING AN AD FOR THE NAVY?
[KR-1 = 8]

YES ..... 1 (CATI CHECK #KR13)
NO 2 (KR-12)

KR-12. [Do you recall seeing or hearing any advertising for] The Navy?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR13: DID RESPONDENT RECALL SEEING OR HEARING ONE AD FOR ALL THE SERVICES?
[KR-1 = 9]

YES ..... 1 (CATI CHECK #KR14)
NO 2 (KR-13)

KR-13. [Do you recall seeing or hearing any advertising for] All the services in one ad?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

CATI CHECK #KR14: DID RESPONDENT RECALL SEEING OR HEARING ARMY OR ARMY COMPONENT AD?
[KR-1 = 2], OR
[KR-2, OR KR-3 OR KR-4 = 2] OR
[KR-6, OR KR-7, OR KR-8, OR KR-9 = 1]

YES 1 (KR-14)
NO ..... 2 (CATI CHECK #KR15)

KR-14. Did you see or hear Army ads...

	YES	NO	REF	DK
On TV?	1	2	-7	-8
On the radio?	1	2	-7	-8
In magazines?	1	2	-7	-8
In newspapers?	1	2	-7	-8
On billboards?	1	2	-7	-8
Through the mail?	1	2	-7	-8
On posters?	1	2	-7	-8
In brochures or pamphlets?	1	2	-7	-8
In the Yellow Pages?	1	2	-7	-8
Somewhere else?	1	2	-7	-8

CATI CHECK #KR15: DID RESPONDENT RECALL SEEING OR HEARING AN ARMY AD (UNAIDED OR AIDED)?
[KR-1 = 2 OR KR-6 = 1]

YES 1 (KR-15)
NO ..... 2 (CATI CHECK #KR16)

KR-15. Other than trying to get you to enlist, what was the main message you got from Army advertising?

[VERBATIM RESPONSES RECORDED]

CATI CHECK #KR16: DID RESPONDENT RECALL ANY ADS OTHER THAN THE ARMY AD?
[KR-1 = 1, 3, 4, 5, 6, 7, 8 OR 9] OR
[KR-5, OR KR-7, OR KR-8, OR KR-9, OR KR-10, OR KR-11, OR KR-12, OR KR-13 = 1]

YES ..... 1 (CATI CHECK #KR17)
NO ..... 2 (ATTITUDES MODULE)

#KR17: RANDOMLY SELECT SERVICE OR SERVICE COMPONENT OR JOINT SERVICES AD FROM THOSE RECALLED (OTHER THAN ARMY)

KR-17. Other than trying to get you to enlist, what was the main message you got from (SERVICE/SERVICE COMPONENT) advertising?

[VERBATIM RESPONSES RECORDED]

[GO TO ATTITUDES MODULE]

CATI CHECK #AT1: DID RESPONDENT RECALL SEEING OR HEARING ARMY ADS?
[KR-1 = 2 OR KR-6 = 1]

YES 1 (AT-1)
NO ..... 2 (SLOGAN MODULE)

AT-1. Use a scale of "1" to "5" where "1" means you do not like the advertising and "5" means you like the advertising very much.

Overall, how much do you like the Army ads you have seen or heard over the past year?

DO NOT LIKE	1
SOMEWHAT DISLIKE	2
NEUTRAL	3
LIKE SOMEWHAT	4
LIKE VERY MUCH	5
REFUSED	-7
DON'T KNOW	-8

AT-2. Use a scale of "1" to "5" where "1" means you do not believe the advertising and "5" means you believe the advertising very much.

How much do you believe what the ads say?

DO NOT BELIEVE	1
SOMEWHAT DISBELIEVE	2
NEUTRAL	3
BELIEVE SOMEWHAT	4
STRONGLY BELIEVE	5
REFUSED	-7
DON'T KNOW	-8

[GO TO SLOGAN RECOGNITION MODULE]

PE-1. I am going to read you a list of statements describing different things the Army might offer. Please tell me how much you disagree or agree that the Army offers each item on the list. A "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

	DS				AG	REF	DK
The Army offers...							
A. a wide variety of opportunities to find a job you can enjoy?	1	2	3	4	5	-7	-8
B. a physically challenging environment?	1	2	3	4	5	-7	-8
C. an experience you can be proud of?	1	2	3	4	5	-7	-8
D. an advantage over going right from high school to college?	1	2	3	4	5	-7	-8
E. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
F. the chance to work with the latest high tech equipment?	1	2	3	4	5	-7	-8
G. a great value in your civilian career development?	1	2	3	4	5	-7	-8
H. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
I. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
J. a mentally challenging experience?	1	2	3	4	5	-7	-8
K. an opportunity for you to become more mature and responsible?	1	2	3	4	5	-7	-8
L. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
M. many chances to work with highly trained people?	1	2	3	4	5	-7	-8
N. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8

CATI CHECK #PE2: RANDOMLY SELECT A CAREER OPTION FROM ARMY RESERVE, ARMY NATIONAL GUARD, AIR FORCE, NAVY, MARINE CORPS, GOING TO COLLEGE, WORKING IN A FULL-TIME CIVILIAN JOB, ALL SERVICES.

#PE3: WHICH CAREER OPTION WAS SELECTED?

ARMY RESERVE 1 (PE-1A)
ARMY NATIONAL GUARD 2 (PE-4A)
AIR FORCE 3 (PE-6)
NAVY 4 (PE-6)
MARINE CORPS 5 (PE-6)
ALL SERVICES 6 (PE-6)
WORKING IN A FULL-TIME CIVILIAN JOB 7 (PE-7)
GOING TO COLLEGE 8 (PE-8)

PE-1A. Have you ever heard of the United States Army Reserve?

YES 1 (PE-4)
NO ..... (PE-4A)
REFUSED ..... -7 (PE-4A)
DON'T KNOW ... -8 (PE-4)

PE-4. Now, I am going to read you a list of things the United States Army Reserve might offer. Please tell me how much you disagree or agree that the United States Army Reserve offers each item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

The United States Army Reserve offers:

	DS				AG	REF	DK
A. a wide variety of opportunities to find a job you can enjoy?	1	2	3	4	5	-7	-8
B. an experience you can be proud of?	1	2	3	4	5	-7	-8
C. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
D. a great value in your civilian career development?	1	2	3	4	5	-7	-8
E. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
F. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
G. a mentally challenging experience?	1	2	3	4	5	-7	-8
H. the opportunity to become more mature and responsible?	1	2	3	4	5	-7	-8
I. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
J. many chances to work highly trained people?	1	2	3	4	5	-7	-8
K. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8
L. an opportunity to serve America while staying in your own home?	1	2	3	4	5	-7	-8
M. a chance to serve your own community?	1	2	3	4	5	-7	-8
N. interesting and exciting weekends?	1	2	3	4	5	-7	-8

[SKIP TO PE-12]

PE-4A. Have you ever heard of the United States Army National Guard?

YES	1	(PE-5)
NO	2	(PE-12)
REFUSED	-7	(PE-6)
DON'T KNOW ...	-8	(PE-12)

PE-5. Now, I am going to read you a list of statements describing different things the United States Army National Guard might offer. Please tell me how much you disagree or agree that the United States Army National Guard offers each item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

The Army National Guard offers:

	DS				AG	REF	DK
A. a wide variety of opportunities to find a job you can enjoy?	1	2	3	4	5	-7	-8
B. an experience you can be proud of?	1	2	3	4	5	-7	-8
C. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
D. a great value in your civilian career development?	1	2	3	4	5	-7	-8
E. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
F. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
G. a mentally challenging experience?	1	2	3	4	5	-7	-8
H. an opportunity to become more mature and responsible?	1	2	3	4	5	-7	-8
I. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
J. many chances to work with highly trained people?	1	2	3	4	5	-7	-8
K. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8
L. an opportunity to serve America while staying in your own home?	1	2	3	4	5	-7	-8
M. a chance to serve your own community?	1	2	3	4	5	-7	-8
N. gives you interesting and exciting weekends?	1	2	3	4	5	-7	-8

[SKIP TO PE-12]

PE-6. I am going to read you a list of statements describing different things the (SERVICE) might offer. Please tell me how much you disagree or agree that the (SERVICE) offers item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

The (SERVICE) offers:

	DS				AG	REF	DK
A. a wide variety of opportunities to find a job you can enjoy?	1	2	3	4	5	-7	-8
B. a physically challenging environment?	1	2	3	4	5	-7	-8
C. an experience you can be proud of?	1	2	3	4	5	-7	-8
D. an advantage over going right from high school to college?	1	2	3	4	5	-7	-8
E. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
F. the chance to work with the latest high tech equipment?	1	2	3	4	5	-7	-8
G. a great value in your civilian career development?	1	2	3	4	5	-7	-8
H. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
I. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
J. a mentally challenging experience?	1	2	3	4	5	-7	-8
K. an opportunity to become more mature and responsible?	1	2	3	4	5	-7	-8
L. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
M. many chances to work with highly trained people?	1	2	3	4	5	-7	-8
N. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8

[SKIP TO PE-12]

PE-7. I am going to read you a list of statements describing different things working in a full-time civilian job might offer. Please tell me how much you disagree or agree that working in a full-time civilian job offers each item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

Working in a full-time civilian job offers:

	DS				AG	REF	DK
A. a physically challenging environment?	1	2	3	4	5	-7	-8
B. an experience you can be proud of?	1	2	3	4	5	-7	-8
C. an advantage over going right from high school to college?	1	2	3	4	5	-7	-8
D. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
E. the chance to work with the latest high tech equipment?	1	2	3	4	5	-7	-8
F. a great value in your civilian career development?	1	2	3	4	5	-7	-8
G. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
H. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
I. a mentally challenging experience?	1	2	3	4	5	-7	-8
J. the opportunity to become more more mature and responsible?	1	2	3	4	5	-7	-8
K. many opportunities for training in useful skill areas?	1	2	3	4	5	-7	-8
L. many chances to work with highly trained people?	1	2	3	4	5	-7	-8
M. an excellent opportunity to obtain money for a college or vocational education?	1	2	3	4	5	-7	-8

[SKIP TO PE-12]

PE-8. I am going to read you a list of statements describing different things going to college might offer. Please tell me how much you disagree or agree that going to college offers each item on the list. Again, a "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

Going to college offers...

	DS				AG	REF	DK
A. an experience you can be proud of?	1	2	3	4	5	-7	-8
B. an opportunity to develop leadership skills?	1	2	3	4	5	-7	-8
C. a great value in your civilian career development?	1	2	3	4	5	-7	-8
D. an excellent opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
E. the opportunity to develop your potential?	1	2	3	4	5	-7	-8
F. a mentally challenging experience?	1	2	3	4	5	-7	-8
G. the opportunity to become more mature and responsible?	1	2	3	4	5	-7	-8
H. many chances to work with highly trained people?	1	2	3	4	5	-7	-8

PE-12. Of the people who joined the Army in the last year, what proportion do you think are high school diploma graduates? Would you say...

less than one quarter, ... 1
about one quarter, ... 2
about one half, ... 3
about three quarters, or 4
almost all? 5
REFUSED ..... -7
DON'T KNOW ..... -8

PE-13. Of the people who joined the Army last year, what proportion do you think would score in the upper half of an intelligence test? Is it...

all of them,	1
three quarters of them,	2
half of them,	3
one quarter of them, or	4
none of them?	5
REFUSED	-7
DON'T KNOW	-8

PE-14. Of the people who joined the Army in the last year, what proportion do you think will get a college diploma either while they are in the Army or after they complete their Army service? Would you say...

less than one quarter,	1
about one quarter,	2
about one half,	3
about three quarters, or	4
almost all?	5
REFUSED	-7
DON'T KNOW	-8

PE-15. Do you think very many young (men/women) with backgrounds and plans for the future like (YOUTH) are joining the Army?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #PE1: IS YOUTH ROTC POTENTIAL?

YES 1 (PE-15A)
NO ..... 2 (KNOWLEDGE AWARENESS MODULE)

PE-15A. Have you ever heard of the Army Reserve Officer's Training Corps on a college campus?

YES	1	(PE-2)
NO	2	(KNOWLEDGE-AWARENESS MODULE)
REFUSED	-7	(KNOWLEDGE-AWARENESS MODULE)
DON'T KNOW	-8	(PE-2)

PE-2. Next, I will read you a few statements describing different things that the Army Reserve Officer's Training Corps on the college campus might offer. Please tell me how much you disagree or agree that being an officer offers each item on the list. A "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

The Army Reserve Officer's Training Corps on the college campus provides...

	DS				AG	REF	DK
A. leadership and management training?	1	2	3	4	5	-7	-8
B. the opportunity to develop self-confidence?	1	2	3	4	5	-7	-8
C. a college elective that can be taken together with other college courses?	1	2	3	4	5	-7	-8
D. an officer's commission in the active Army, Army Reserve, or the Army National Guard?	1	2	3	4	5	-7	-8

PE-3. Being an officer in the United States Army means different things to different people. Please tell me how much you disagree or agree that being an officer offers each item on the list. A "1" means you disagree completely, a "2" means you disagree somewhat, a "3" means you neither agree nor disagree, a "4" means you agree somewhat and a "5" means you agree completely.

Being an officer in the United States Army provides...

	DS				AG	REF	DK
A. a wide variety of job opportunities?	1	2	3	4	5	-7	-8
B. experiences you can be proud of?	1	2	3	4	5	-7	-8
C. the opportunity to use your college acquired skills?	1	2	3	4	5	-7	-8
D. the opportunity to make changes and use your own judgment?	1	2	3	4	5	-7	-8

[GO TO KNOWLEDGE-AWARENESS MODULE]

KA-7. Is it possible to earn money for college by enlisting in the Army?

YES	1	(KA-1)
NO	2	(CATI CHECK #KA4)
REFUSED	-7	(KA-1)
DON'T KNOW	-8	(KA-1)

KA-1. How much do you think a young (man/woman) can earn through Army education benefits for college?

[PROBE: This would be the total education benefits that could be earned while in the Army.]

UNDER $5,000	1
$5,000 TO $9,999	2
$10,000 TO $14,999	3
$15,000 TO $19,999	4
$20,000 TO $24,999	5
$25,000 OR MORE	6
REFUSED	-7
DON'T KNOW	-8

KA-2. Do you think Army education benefits would pay for (YOUTH's) entire college education?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

KA-3. Do you think Army education benefits are more, less or about the same as the Navy, Air Force, or Marines offer?

MORE	1
LESS	2
ABOUT THE SAME	3
REFUSED	-7
DON'T KNOW	-8

CATI CHECK #KA4: ROTATE ORDER OF SERVICES FOR KA-4

KA-4. Please tell me whether or not each of the following services offers the "GI Bill"?

	DOES OFFER	DOES NOT OFFER	REF	DK
Army	1	2	-7	-8
Air Force	1	2	-7	-8
Navy	1	2	-7	-8
Marines	1	2	-7	-8

KA-5. What is the minimum number of years that a new recruit has to serve on active duty in the Army?

_____
REFUSED ..... -7
DON'T KNOW ..... -8

KA-6. Is it possible to sign up for the Army and actually start serving up to one year later?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

KA-8. Are 17 year old high school juniors eligible to join the Army Reserve or Army National Guard?

YES 1 (KA-10)
NO 2 (KA-9)
REFUSED ..... -7 (KA-9)
DON'T KNOW ..... -8 (KA-9)

KA-9. Is high school graduation required before joining the Army Reserve or Army National Guard?

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

KA-10. Who sponsors the "Scholar-Athlete Award Program"? Is it the...

Marine Corps, ... 1
National Guard, ... 2
Army Reserve, ... 3
Air Force,or 4
Navy? 5
REFUSED ..... -7
DON'T KNOW ..... -8

KA-11. Can qualified people who join the Army Reserve or Army National Guard receive money for college?

YES 1 (KA-12)
NO 2 (KA-13)
REFUSED ..... -7 (KA-12)
DON'T KNOW ..... -8 (KA-12)

KA-12. What is the maximum amount of money for college that qualified people who join the Army Reserve or Army National Guard can receive under the "GI Bill"?

UNDER $1,000	1
$1,000 TO $1,999	2
$2,000 TO $3,999	3
$4,000 TO $5,999	4
$6,000 TO $7,999	5
$8,000 TO $9,999	6
$10,000 OR MORE	7
REFUSED	-7
DON'T KNOW	-8

[GO TO DEMOGRAPHICS MODULE]

INTRODUCTION: Now I have some questions about your background.

DE-1. First, what is your birthdate?

_____/_____/_____
MONTH DAY YEAR
REFUSED ..... -7
DON'T KNOW ..... -8

DE-3. Please tell me whether you consider yourself...

White, ... 1
Black, ... 2
Asian or Pacific Islander, or 3
American Indian, Alaskan Native? ... 4
REFUSED ..... -7
DON'T KNOW ..... -8

DE-4. Are you of Hispanic background?

[INCLUDES SPANISH-AMERICAN, MEXICAN AMERICAN, CHICANO, CUBAN-AMERICAN]

YES 1
NO 2
REFUSED ..... -7
DON'T KNOW ..... -8

[QUESTION BANK ITEM DE-5 NOT USED IN QUARTER 1]

DE-6. What is your current marital status? Are you:

Single, ... 1
Married, ... 2
Separated, ... 3
Divorced, or 4
Widowed? 5
REFUSED ..... -7
DON'T KNOW ..... -8

[QUESTION BANK ITEMS DE-7, DE-8 NOT USED IN QUARTER 1]

DE-9. What is the highest grade or year of school or college that you have completed and gotten credit for?

LESS THAN 8TH GRADE	07	(DE-11)
8TH GRADE	08	(DE-11)
9TH GRADE	09	(DE-11)
10TH GRADE	10	(DE-11)
11TH GRADE	11	(DE-11)
12TH GRADE	12	(DE-10)
1ST YEAR OF 4-YEAR COLLEGE (FR)	13	(DE-10)
2ND YEAR OF 4-YEAR COLLEGE (SO)	14	(DE-10)
3RD YEAR OF 4 YEAR COLLEGE (JR)	15	(DE-10)
4TH YEAR OF 4 YEAR COLLEGE (SR)	16	(DE-10)
5TH YEAR COLLEGE/1ST YEAR GRADUATE OR PROFESSIONAL SCHOOLS	17	(DE-10)
2ND YEAR GRADUATE OR PROFESSIONAL SCHOOL	18	(DE-10)
3RD YEAR GRADUATE OR PROFESSIONAL SCHOOL	19	(DE-10)
MORE THAN 3 YEARS GRADUATE/ PROFESSIONAL SCHOOL	20	(DE-10)
1ST YEAR OF JUNIOR OR COMMUNITY COLLEGE	21	(DE-10)
2ND YEAR OF JUNIOR OR COMMUNITY COLLEGE	22	(DE-10)
1ST YEAR OF VOCATIONAL, BUSINESS, OR TRADE SCHOOL	23	(DE-10)
2ND YEAR OF VOCATIONAL, BUSINESS, OR TRADE SCHOOL	24	(DE-10)
MORE THAN 2 YEARS VOCATIONAL, BUSINESS, OR TRADE SCHOOL	25	(DE-10)
REFUSED	-7	(DE-10)
DON'T KNOW	-8	(DE-10)

DE-10. Do you have a regular high school diploma, a GED, an ABE, or some other kind of certificate (of high school completion)?

REGULAR HIGH SCHOOL DIPLOMA	1
GED (GENERAL EDUCATIONAL DEVELOPMENT)	2
ABE (ADULT BASIC EDUCATION) CERTIFICATE (E.G., CORRESPONDENCE, NIGHT SCHOOL)	3
SOME OTHER KIND OF CERTIFICATE	4
NONE OF THE ABOVE	5
REFUSED	-7
DON'T KNOW	-8

DE-11. Are you currently employed either full-time or part-time?

YES, FULL-TIME	1	(DE-13)
YES, PART-TIME	2	(DE-12)
NO	3	(DE-12)
REFUSED	-7	(DE-12)
DON'T KNOW	-8	(DE-12)

DE-12. Have you ever held a full-time job? [MORE THAN 34 HOURS PER WEEK]

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

DE-13. How easy or difficult is it for someone (YOUTH'S NAME) age to get a full-time job in your community? Is it....

Almost impossible	1
Very difficult	2
Somewhat difficult, or	3
Not difficult at all	4
REFUSED	-7
DON'T KNOW	-8

[QUESTION BANK ITEMS DE-14, DE-15, DE-16, DE-17, DE-18, DE-19, DE-20, DE-21, DE-22, DE-23, DE-24, DE-25, DE-26, DE-27, DE-28 NOT USED IN QUARTER 1]

DE-29. I am going to read you some income categories and ask you to choose the letter of the alphabet associated with the category that best describes your total family income for the year 1985. Include all sources of income in your response. Please tell me only the letter.

A-Less than $5,000	1
B-$5,001 to $10,000	2
C-$10,001 to $20,000	3
D-$20,001 to $30,000	4
E-$30,001 to $40,000	5
F-$40,001 to $50,000	6
G-$50,001 and above	7
REFUSED	-7
DON'T KNOW	-8

DE-30. Have you ever served in the United States Armed Forces?

YES	1	(DE-31)
NO	2	(TERMINATE)
REFUSED	-7	(TERMINATE)
DON'T KNOW	-8	(TERMINATE)

DE-31. What month and year did you begin military service?

MONTH / YEAR	
REFUSED	-7
DON'T KNOW	-8

DE-32. Are you still in the Armed Forces?

YES	1
NO	2
REFUSED	-7
DON'T KNOW	-8

DE-33. What month and year (did/will) you finish serving in the Armed Forces?

_____/_____
MONTH YEAR

REFUSED	-7
DON'T KNOW	-8

DE-34. In which branch of the Armed Forces (did you serve/are you serving)?

Army	1	(DE-35)
Navy	2	(TERMINATE)
Marines	3	(TERMINATE)
Air Force	4	(TERMINATE)
Coast Guard	5	(TERMINATE)
REFUSED	-7	(TERMINATE)
DON'T KNOW	-8	(TERMINATE)

DE-35. Were you part of the Reserve Officers Training Corps (ROTC), a National Guard unit or the Army Reserves?

YES, ROTC	1
YES, NATIONAL GUARD	2
YES, ARMY RESERVES	3
NO	4
REFUSED	-7
DON'T KNOW	-8

[QUESTION BANK ITEMS DE-36, DE-37, DE-38, DE-39, DE-40, DE-41, DE-42 NOT USED IN QUARTER 1]

Appendix B

Codebook and Variables Constructed for the Model

Appendix B
Codebook and Variables Constructed for the Model

This appendix contains information necessary to construct and evaluate the variables used in the youth and linked Army enlistment model discussed in Chapter 6. It presents the variables in the order they are introduced in the analysis. For each variable, the appendix contains the SAS code used to create the variable, and unweighted frequencies. Where the model incorporated variables directly from the ACOMS data set, the appendix presents the unweighted frequencies only. Table B-1 provides a crosswalk of SAS variables with the labels used in the analysis and descriptions of the variables.

Table B-1.
Constructed Variables and ACOMS Parental and Youth Survey Variables Used in the Analysis

ACOMS Variable Name	Analytic Model Variable Name	Description
ECALCAGE	Age	Youth age
ERACE	Race	Youth racial background
HIWGT	AFQT status	Youth predicted AFQT status
YHSSRPLS	HS Senior	High school senior
YHSNONSR	HS Nonsenior	High school nonsenior
Y4YCOL	In College	Attending four-year college
YBEYHSIP	Other postsecondary	Attending other postsecondary
YHSGWFT	Working	High school graduate not in school, working full-time
YHSGNWFT	Not working	High school graduate not in school, not working full-time
MIL_EXP1	Military exposure	Exposure to the military
MIL_EXP2	Army exposure	Exposure to the Army
Y_SCORE	Youth knowledge	Composite youth knowledge of Army benefits
COLLBEH	College behaviors	Behaviors leading to college
WORKBEH	Work behaviors	Behaviors leading to a full-time job
ARMYBEH	Army behaviors	Behaviors leading to Army enlistment
CASHED	Cash for education	Youth attitude score: money for education
HITECH	High-tech equipment	Youth attitude score: working with high-tech equipment
LEADER	Leadership	Youth attitude score: develop leadership skills
MATURE	Maturity	Youth attitude score: become more mature
MENTAL	Mental challenge	Youth attitude score: have a mental challenge
PHYS	Physical challenge	Youth attitude score: have a physical challenge
POTEN	Potential	Youth attitude score: develop self-potential
PROUD	Proud experience	Youth attitude score: have an experience to be proud of
SELCON	Self-confidence	Youth attitude score: develop self-confidence
TRAIN	Training	Youth attitude score: train in useful skill areas
HIQUAL	High quality	Youth attitude score: work with hiqh quality people
YATT	Youth attitude	Composite youth attitude score
ARMY	Army intent	Army enlistment propensity
INTENTM1	Military intent	General military enlistment propensity
COLLEGE	College intent	College propensity
WORK	Work intent	Work propensity
YARMDAD	Father attitude	Father attitude toward youth enlistment
YARMMOM	Mother attitude	Mother attitude toward youth enlistment
YARMFARM	Army friend attitude	Friends with Army experience attitude toward youth enlistment
YARMFMIL	Military friend attitude	Friends with military experience attitude toward youth enlistment
YARMFN0	Other friend attitude	Friends with no military experience attitude toward youth enlistment

Table B-1 (Continued)

Variable	Analytic Model Variable Name	Description
YPESIM2	Similar people enlist	Similar people enlisting
EDUCATE	Parent education	Education of parent with whom youth lives
BUCKS	Parent race	Recoded parental income
PDMILSER	Parent military	Parental prior military service
PSEXSAMP	Parent gender	Parental gender
PCASHED	Parent cash for education	Parental attitude score: money for education
PHITECH	Parent hi-tech	Parental attitude score: working with high-tech equipment
PLEADER	Parent leadership	Parental attitude score: develop leadership skills
PMATURE	Parent maturity	Parental attitude score: become more mature
PMENTAL	Parent mental challenge	Parental attitude score: have a mental challenge
PPHYS	Parent physical challenge	Parental attitude score: have a physical challenge
PPOTEN	Parent potential	Parental attitude score: develop self-potential
PPROUD	Parent proud experience	Parental attitude score: have an experience to be proud of
PSELCON	Parent self-confidence	Parental attitude score: develop self-confidence
PTRAIN	Parent train	Parental attitude score: train in useful skill areas
PHIQUAL	Parent high quality	Parental attitude score: work with hiqh quality people
PATT	Parent attitude	Composite parental attitude score
PILIKEDO	Parental preference	Parental preference for youth future plans
PIOFTPLN	Parent talk about plans	Frequency of parental talks about youth future plans
PITLKOPN	Parent give opinion	Parent gives opinion during talks with youth
PIPOIADS	Parent point out ads	Parent points out service ads to youth
PISUGREC	Parent suggest recruiter	Parent suggest youth see military recruiter
PLNSTLK	Parent talk about future	Discussions about the future
ADS_REC	Parent encouragement	Parental encouragement of enlistment
MILTLK1	Frequency of talks	Frequency of discussions about military enlistment
P_SCORE	Parental knowledge	Composite parental knowledge of Army benefits
MATCHFLG	Enlistment	Youth application recorded on MEPCOM Edit Files

Youth Attitude Scale.

```
ARRAY Y4 {*} YACASHED YAHITECH YALEADER YAMATURE YAMENTAL
    YAPHYS YAPOTEN YAPROUD YASELCON YATRAIN YAHIQUAL ;
DO I=1 TO DIM(Y4) ;
   IF Y4{I} < 0 THEN Y4{I} = . ;
   ELSE Y4{I} = Y4{I} - 3 ;
END ;

CASHED = YACASHED * YICASHED;
      HITECH = YAHITECH * YIHITECH;
      LEADER = YALEADER * YILEADER;
      MATURE = YAMATURE * YIMATURE;
      MENTAL = YAMENTAL * YIMENTAL;
      PHYS = YAPHYS * YIPHYS;
      POTEN = YAPOTEN * YIPOTEN;
      PROUD = YAPROUD * YIPROUD;
      SELCON = YASELCON * YISELCON;
      TRAIN = YATRAIN * YITRAIN;
      HIQUAL = YAHIQUAL * YIHIQUAL;
```

CASHED	Frequency	Percent
-10	11	0.5
-8	2	0.1
-6	3	0.1
-5	31	1.3
-4	15	0.6
-3	14	0.6
-2	15	0.6
-1	10	0.4
0	323	13.7
1	43	1.8
2	109	4.6
3	104	4.4
4	272	11.5
5	427	18.1
6	103	4.4
8	198	8.4
10	684	28.9

Frequency Missing = 7

HITECH	Frequency	Percent
-10	7	0.3
-8	7	0.3
-6	2	0.1
-5	12	0.5
-4	10	0.4
-3	11	0.5
-2	16	0.7
-1	9	0.4
0	343	14.5
1	36	1.5
2	112	4.7
3	185	7.8
4	332	14
5	286	12.1
6	180	7.6
8	240	10.2
10	576	24.4

Frequency Missing = 7

LEADER	Frequency	Percent
-10	18	0.8
-8	6	0.3
-6	4	0.2
-5	32	1.4
-4	27	1.1
-3	25	1.1
-2	11	0.5
-1	8	0.3
0	398	16.8
1	20	0.8
2	36	1.5
3	159	6.7
4	387	16.4
5	422	17.9
6	47	2
8	174	7.4
10	590	25

Frequency Missing = 7

MATURE	Frequency	Percent
-10	21	0.9
-8	1	0
-6	3	0.1
-5	29	1.2
-4	31	1.3
-3	11	0.5
-2	8	0.3
-1	4	0.2
0	335	14.2
1	12	0.5
2	24	1
3	61	2.6
4	230	9.7
5	555	23.5
6	29	1.2
8	110	4.6
10	902	38.1

Frequency Missing = 5

MENTAL	Frequency	Percent
-10	24	1
-8	9	0.4
-6	6	0.3
-5	63	2.7
-4	40	1.7
-3	25	1.1
-2	14	0.6
-1	7	0.3
0	530	22.4
1	20	0.8
2	33	1.4
3	97	4.1
4	324	13.7
5	435	18.4
6	55	2.3
8	182	7.7
10	501	21.2

Frequency Missing = 6

PHYS	Frequency	Percent
-10	13	0.5
-8	6	0.3
-6	2	0.1
-5	20	0.8
-4	14	0.6
-3	13	0.5
-2	10	0.4
-1	2	0.1
0	273	11.5
1	20	0.8
2	60	2.5
3	132	5.6
4	328	13.9
5	363	15.3
6	127	5.4
8	315	13.3
10	668	28.2

Frequency Missing = 5

POTEN	Frequency	Percent
-10	26	1.1
-8	6	0.3
-6	6	0.3
-5	50	2.1
-4	32	1.4
-3	13	0.5
-2	4	0.2
-1	2	0.1
0	483	20.4
1	8	0.3
2	9	0.4
3	54	2.3
4	229	9.7
5	672	28.4
6	13	0.5
8	70	3
10	689	29.1

Frequency Missing = 5

PROUD	Frequency	Percent
-10	30	1.3
-8	5	0.2
-6	3	0.1
-5	59	2.5
-4	23	1
-3	11	0.5
-2	7	0.3
-1	2	0.1
0	458	19.4
1	6	0.3
2	10	0.4
3	54	2.3
4	239	10.1
5	572	24.2
6	13	0.5
8	101	4.3
10	771	32.6

Frequency Missing = 7

SELCON	Frequency	Percent
-10	30	1.3
-8	4	0.2
-6	1	0
-5	36	1.5
-4	21	0.9
-3	18	0.8
-2	9	0.4
-1	3	0.1
0	430	18.2
1	15	0.6
2	28	1.2
3	78	3.3
4	257	10.9
5	571	24.2
6	25	1.1
8	106	4.5
10	732	31

Frequency Missing = 7

TRAIN	Frequency	Percent
-10	19	0.8
-8	7	0.3
-6	2	0.1
-5	42	1.8
-4	19	0.8
-3	11	0.5
-2	11	0.5
-1	8	0.3
0	384	16.2
1	15	0.6
2	26	1.1
3	88	3.7
4	316	13.4
5	495	20.9
6	38	1.6
8	171	7.2
10	715	30.2

Frequency Missing = 4

HIQUAL	Frequency	Percent
-10	15	0.6
-8	4	0.2
-6	4	0.2
-5	29	1.2
-4	33	1.4
-3	20	0.8
-2	14	0.6
-1	6	0.3
0	392	16.5
1	15	0.6
2	34	1.4
3	155	6.5
4	296	12.5
5	415	17.5
6	69	2.9
8	186	7.9
10	682	28.8

Frequency Missing = 2

Enlistment Intention.

```
ARMY=. ; /* Army intention */
IF YIPDOMIL=1 & (YPBRAN1=2 OR YPBRAN2=2) THEN ARMY=1 ;
   /* most likely */
   ELSE IF YPROBAR IN(1,2) THEN ARMY=2 ; /* likely */
   ELSE IF YIPDOMIL=1 THEN ARMY=2 ; /* likely */
   ELSE IF YPROBAR=3 THEN ARMY=3 ; /* probably not */
   ELSE ARMY=4 ; /* definitely not */
```

ARMY	Frequency	Percent
1	177	7.5
2	416	17.5
3	1014	42.8
4	764	32.2

```
INTENTM1=. ; /* general military intention */
IF YPSRVMIL=1 THEN INTENTM1=1 ; /* most likely */
   ELSE IF YIPDOMIL=1 THEN INTENTM1=2 ; /* very likely */
   ELSE IF YPROBMIL IN(1,2) THEN INTENTM1=3 ; /* likely */
   ELSE IF YPROBMIL=3 THEN INTENTM1=4 ; /* probably not */
   ELSE INTENTM1=5 ; /* definitely not */
```

INTENTM1	Frequency	Percent
1	129	5.4
2	242	10.2
3	384	16.2
4	953	40.2
5	663	28.0

Enlistment Behavior.

MATCHFLG	Frequency	Percent
0	1836	77.4
1	535	22.6

Other Intentions.

```
COLLEGE=. ; /* College Propensity */
IF YIPDOSCH=1 & YPROBCOL IN(1,2) THEN COLLEGE=1 ; /* most likely */
   ELSE IF YPROBCOL IN(1,2) THEN COLLEGE=2 ; /* likely */
   ELSE IF YPROBCOL=3 THEN COLLEGE=3 ; /* probably not */
   ELSE COLLEGE=4 ; /* definitely not */
```

COLLEGE	Frequency	Percent
1	1657	69.9
2	194	8.2
3	351	14.8
4	169	7.1

```
WORK=. ; /* Work Propensity */
IF YIPDOEMP=1 AND YPROBEMP IN(1,2) THEN WORK=1 ; /* most likely */
   ELSE IF YPROBEMP IN(1,2) THEN WORK=2 ; /* likely */
   ELSE IF YPROBEMP=3 THEN WORK=3 ; /* probably not */
   ELSE WORK=4 ; /* definitely not */
```

WORK	Frequency	Percent
1	1375	58.0
2	725	30.6
3	209	8.8
4	62	2.6

Intermediate Career Behaviors.

```
COLLBEH=0 ; /* no college-related search behaviors */
IF YEDKIND IN(8,9) THEN COLLBEH=4 ; /* in college */
   ELSE IF YBCAPPL=1 THEN COLLBEH=3 ;
   /* definitive - applied */
   ELSE IF YBCTEST=1 THEN COLLBEH=2 ;
   /* intermediate - tested */
   ELSE IF YBCTALK=1 THEN COLLBEH=1 ;
   /* preliminary - talked */
```

COLLBEH	Frequency	Percent
0	634	26.7
1	617	26.0
2	429	18.1
3	280	11.8
4	411	17.3

```
WORKBEH=0 ; /* no work-related search behaviors */
IF YEMPCUR=1 & YEMPHOUR >= 35 THEN WORKBEH=4 ; /* working */
   ELSE IF YBWAPPL=1 THEN WORKBEH=3 ;
   /* definitive - applied */
   ELSE IF YBWVISIT=1 THEN WORKBEH=2 ;
   /* intermediate - visit */
   ELSE IF YBWTALK=1 THEN WORKBEH=1 ;
   /* preliminary - talked */
```

WORKBEH	Frequency	Percent
0	1144	48.2
1	133	5.6
2	53	2.2
3	513	21.6
4	528	22.3

```
ARMYBEH=0 ; /* no Army-related search behaviors */
IF YBATEST=1 AND (YBAVISIT=1 OR YBMRECAR=1 OR YBAREC=1)
   THEN ARMYBEH=3 ;
   /* definitive - tested and talked with/visited
     Army recruiter */
   ELSE IF YBAVISIT=1 OR YBMRECAR=1 OR YBAREC=1 THEN ARMYBEH=2 ;
   /* intermediate - visit */
   ELSE IF YBATEST=1 THEN ARMYBEH=2 ;
   /* intermediate - test but not visit/talk with recruiter */
   ELSE IF YBATALK=1 THEN ARMYBEH=1 ;
   /* preliminary - talked */
```

ARMYBEH	Frequency	Percent
0	1425	60.1
1	208	8.8
2	566	23.9
3	172	7.3

Youth Knowledge about Army Benefits.

```
Y_SCORE=SUM((YXKAEDBN=1),(YXKAEARN=1),(YXKASAME=1),
   (YXKAGIAR=1),(YXKAYRS=1),(YXKADEP=1)) ;
```

Y_SCORE	Frequency	Percent
0	1218	51.4
1	30	1.3
2	106	4.5
3	350	14.8
4	399	16.8
5	212	8.9
6	56	2.4

Subjective Norms.

```
/* similar people enlisting */
YPESIM2= . ;
IF YPESIM=1 THEN YPESIM2=3 ;
   ELSE IF YPESIM=2 THEN YPESIM2=1 ;
   ELSE YPESIM2=2 ;
```

YPESIM2	Frequency	Percent
1	982	41.4
2	295	12.4
3	1094	46.1

```
/* Peer-Parent Attitude to Army Enlistment */
ARRAY Y7 {*} YARMDAD YARMMOM YARMFARM YARMFMIL YARMFNO ;
DO I=1 TO DIM(Y7) ;
   IF Y7{I} < 0 THEN Y7{I} = 9 ;
   ELSE Y7{I} = Y7{I} - 3 ;
END ;
```

YARMDAD	Frequency	Percent
-2	208	8.8
-1	336	14.2
0	779	32.9
1	557	23.5
2	480	20.2
9	11	0.5

YARMMOM	Frequency	Percent
-2	469	19.8
-1	451	19.0
0	761	32.1
1	408	17.2
2	270	11.4
9	12	0.5

Parental Attitudes.

```
/* Parental Attitude Scale */
ARRAY P2 {*} PACASHED PAHITECH PALEADER PAMATURE PAMENTAL
   PAPHYS PAPOTEN PAPROUD PASELCON PATRAIN PAHIQUAL ;
DO I=1 TO DIM(P2) ;
   IF P2{I} < 0 THEN P2{I} = . ;
   ELSE P2{I} = P2{I} - 3 ;
END ;

      PCASHED = PACASHED * PICASHED;
      PHITECH = PAHITECH * PIHITECH;
      PLEADER = PALEADER * PILEADER;
      PMATURE = PAMATURE * PIMATURE;
      PMENTAL = PAMENTAL * PIMENTAL;
      PPHYS = PAPHYS * PIPHYS;
      PPOTEN = PAPOTEN * PIPOTEN;
      PPROUD = PAPROUD * PIPROUD;
      PSELCON = PASELCON * PISELCON;
      PTRAIN = PATRAIN * PITRAIN;
      PHIQUAL = PAHIQUAL * PIHIQUAL;
```

PCASHED	Frequency	Percent
-10	27	1.2
-8	10	0.4
-6	15	0.6
-5	52	2.3
-4	21	0.9
-3	19	0.8
-2	26	1.1
-1	5	0.2
0	483	20.9
1	26	1.1
2	66	2.9
3	160	6.9
4	225	9.7
5	324	14
6	112	4.8
8	147	6.4
10	592	25.6

Frequency Missing = 61

PHITECH	Frequency	Percent
-10	42	1.8
-8	12	0.5
-6	14	0.6
-5	46	2
-4	24	1
-3	28	1.2
-2	20	0.9
-1	5	0.2
0	496	21.4
1	16	0.7
2	44	1.9
3	159	6.9
4	246	10.6
5	378	16.3
6	95	4.1
8	123	5.3
10	572	24.7

Frequency Missing = 51

PLEADER	Frequency	Percent
-10	53	2.3
-8	23	1
-6	17	0.7
-5	66	2.8
-4	28	1.2
-3	31	1.3
-2	13	0.6
-1	3	0.1
0	513	21.9
1	7	0.3
2	27	1.2
3	87	3.7
4	257	11
5	508	21.7
6	49	2.1
8	83	3.5
10	575	24.6

Frequency Missing = 31

PMATURE	Frequency	Percent
-10	58	2.5
-8	13	0.6
-6	9	0.4
-5	65	2.8
-4	16	0.7
-3	7	0.3
-2	2	0.1
-1	5	0.2
0	415	17.7
1	9	0.4
2	16	0.7
3	52	2.2
4	181	7.7
5	554	23.6
6	43	1.8
8	86	3.7
10	819	34.9

Frequency Missing = 21

PMENTAL	Frequency	Percent
-10	113	4.8
-8	11	0.5
-6	11	0.5
-5	123	5.3
-4	39	1.7
-3	17	0.7
-2	16	0.7
-1	6	0.3
0	626	26.8
1	6	0.3
2	17	0.7
3	54	2.3
4	196	8.4
5	479	20.5
6	34	1.5
8	68	2.9
10	516	22.1

Frequency Missing = 39

PPHYS	Frequency	Percent
-10	37	1.6
-8	10	0.4
-6	19	0.8
-5	41	1.8
-4	27	1.2
-3	32	1.4
-2	8	0.3
-1	5	0.2
0	460	19.8
1	14	0.6
2	51	2.2
3	189	8.1
4	305	13.1
5	355	15.2
6	108	4.6
8	156	6.7
10	512	22

Frequency Missing = 42

PPOTEN	Frequency	Percent
-10	102	4.3
-8	15	0.6
-6	5	0.2
-5	136	5.8
-4	31	1.3
-3	8	0.3
-2	10	0.4
-1	2	0.1
0	644	27.5
1	5	0.2
2	12	0.5
3	44	1.9
4	115	4.9
5	567	24.2
6	22	0.9
8	64	2.7
10	563	24

Frequency Missing = 26

PPROUD	Frequency	Percent
-10	59	2.5
-8	6	0.3
-6	11	0.5
-5	79	3.4
-4	19	0.8
-3	8	0.3
-2	6	0.3
-1	3	0.1
0	563	24.1
1	7	0.3
2	13	0.6
3	41	1.8
4	155	6.6
5	550	23.5
6	24	1
8	62	2.6
10	734	31.4

Frequency Missing = 31

PSELCON	Frequency	Percent
-10	80	3.4
-8	10	0.4
-6	6	0.3
-5	89	3.8
-4	21	0.9
-3	8	0.3
-2	6	0.3
-1	2	0.1
0	504	21.5
1	6	0.3
2	15	0.6
3	34	1.4
4	151	6.4
5	632	27
6	26	1.1
8	62	2.6
10	693	29.6

Frequency Missing = 26

PTRAIN	Frequency	Percent
-10	64	2.7
-8	22	0.9
-6	16	0.7
-5	95	4.1
-4	37	1.6
-3	28	1.2
-2	11	0.5
-1	5	0.2
0	528	22.6
1	3	0.1
2	19	0.8
3	75	3.2
4	245	10.5
5	479	20.5
6	43	1.8
8	98	4.2
10	571	24.4

Frequency Missing = 32

PHIQUAL	Frequency	Percent
-10	54	2.3
-8	20	0.9
-6	13	0.6
-5	93	4
-4	36	1.5
-3	30	1.3
-2	14	0.6
-1	1	0
0	604	25.9
1	7	0.3
2	21	0.9
3	96	4.1
4	228	9.8
5	418	17.9
6	52	2.2
8	91	3.9
10	556	23.8

Frequency Missing = 37

Parental Communications.

```
PLNSTLK=. ;
IF PIOFTPLN <=2 AND PITLKOPN <=2 THEN PLNSTLK=1 ; /* never/rarely talk of plans */
ELSE IF PIOFTPLN IN(3,4) AND PITLKOPN <1 THEN PLNSTLK=2 ; /* occasionally/often talk;
unsure if opinions given */
ELSE IF PIOFTPLN IN(3,4) AND PITLKOPN =2 THEN PLNSTLK=3 ; /* occasionally/often talk;
neutral */
ELSE IF PIOFTPLN =3 AND PITLKOPN=1 THEN PLNSTLK=4 ; /* occasionally talk; give opinion */
ELSE IF PIOFTPLN =4 AND PITLKOPN=1 THEN PLNSTLK=5 ; /* often talk; give opinion */
```

PIOFTPLN	Frequency	Percent
NEVER	53	2.2
RARELY	158	6.7
OCCASIONALLY	950	40.2
OFTEN	1202	50.9

Frequency Missing = 8

PITLKOPN	Frequency	Percent
GIVE OPINION	1168	51.5
STAY NEUTRAL	1099	48.5

Frequency Missing = 104

PLNSTLK	Frequency	Percent
1	219	9.2
2	47	2.0
3	996	42.0
4	446	18.8
5	663	28.0

```
/* Parental Influence Over Youth's Future Plans Scale */
IF PIPOIADS=1 & PISUGREC=1 THEN ADS_REC=3 ; /* neither point out ads nor suggest recruiter */
ELSE IF PIPOIADS=1 AND PISUGREC=2 THEN ADS_REC=2 ; /* either */
ELSE IF PIPOIADS=2 AND PISUGREC=1 THEN ADS_REC=2 ;
ELSE IF PIPOIADS=2 AND PISUGREC=2 THEN ADS_REC=1 ; /* point out ads & suggest recruiter */
```

PIPOIADS	Frequency	Percent
YES	481	20.4
NO	1877	79.6

Frequency Missing = 13

PISUGREC	Frequency	Percent
YES	495	20.9
NO	1871	79.1

Frequency Missing = 5

ADS_REC	Frequency	Percent
1	1577	66.5
2	583	24.6
3	194	8.2
9	17	0.7

```
/* Parent - Youth Discussions about Military Enlistment */
MILTLK1=. ;
IF PITLKMIL IN(2, -7,-8) THEN MILTLK1=1 ;
   /* no discussion */
   ELSE IF PIOFTMIL=1 THEN MILTLK1=1 ; /* never talk */
   ELSE IF PIOFTMIL=2 THEN MILTLK1=2 ; /* rarely talk */
   ELSE IF PIOFTMIL=3 THEN MILTLK1=3 ; /* occasionally talk */
   ELSE IF PIOFTMIL=4 THEN MILTLK1=4 ; /* often talk */
   ELSE IF PIOFTMIL IN(-7,-8) THEN MILTLK1=1 ; /* never talk */
```

MILTLK1	Frequency	Percent
1	902	38.0
2	339	14.3
3	793	33.4
4	337	14.2

Parental Knowledge about Army Benefits.

```
P_SCORE=SUM((PXKAEDBN=1),(PXKAEARN=1),(PXKASAME=1),
      (PXKAGIAR=1),(PXKAYRS=1),(PXKADEP=1)) ;

/* RECODE MISSING VALUES TO 9 FOR LISREL */
ARRAY MISS{*} ECALCAGE ERACE HIWGT YHSSRPLS YHSNONSR
        Y4YCOL YBEYHSIP YHSGWFT YHSGNWFT
        MIL_EXP1 MIL_EXP2 COLLBEH WORKBEH
        ARMYBEH ARMY INTENTM1 COLLEGE WORK
        YPESIM2 EDUCATE Y_SCORE PLNSTLK ADS_REC
        MILTLK1 MILTLK2 P_SCORE PILIKEDO
        PDRACE PDINCOME PDMILSER PSEXSAMP ;
DO I = 1 TO DIM(MISS) ;
   IF MISS{I}=. OR MISS{I}=.D OR MISS{I}=.R THEN MISS{I}=9 ;
END ;
```

P_SCORE	Frequency	Percent
0	1230	51.9
1	77	3.2
2	177	7.5
3	393	16.6
4	356	15
5	124	5.2
6	14	0.6

Demographics.

```
/* Youth Life Stage Variables */
IF YEDCUR=1 & YEDKIND IN(1,2,3, -8) & YEDENYRH ^IN (9, 10, 11)
   THEN YHSSRPLS=1 ; /* High school senior */
   ELSE YHSSRPLS=0 ;
IF YEDCUR=1 & YEDKIND=1 & YEDENYRH IN(9, 10, 11) THEN YHSNONSR=1 ;
   /* (High school nonsenior) */
   ELSE YHSNONSR=0 ;
IF YEDCUR=1 & YEDKIND=9 THEN Y4YCOL=1 ;
   /* Attending 4-year college */
   ELSE Y4YCOL=0 ;
IF YEDCUR=1 & YEDKIND IN(4,5,6,7,8, 10) THEN YBEYHSIP=1 ;
   /* Other postsecondary */
   ELSE YBEYHSIP=0 ;
IF YEDCUR=2 & YEDLEV>11 & YEMPCUR=1 & YEMPHOUR>34 THEN YHSGWFT=1 ;
   /* High school graduate not enrolled, working full-time */
   ELSE YHSGWFT=0 ;
IF YEDCUR=2 & YEDLEV>11 & YEMPCUR=2 OR YEMPHOUR<35
   THEN YHSGNWFT=1 ;
  /* High school graduate not enrolled, not working full-time */
   ELSE YHSGNWFT=0 ;
```

YHSSRPLS	Frequency	Percent
0	1667	70.3
1	704	29.7

YHSNONSR	Frequency	Percent
0	1530	64.5
1	841	35.5

Y4YCOL	Frequency	Percent
0	2128	89.8
1	243	10.2

YBEYHSIP	Frequency	Percent
0	2167	91.4
1	204	8.6

YHSGWFT	Frequency	Percent
0	2093	88.3
1	278	11.7

YHSGNWFT	Frequency	Percent
0	758	32.0
1	1613	68.0

ECALCAGE	Frequency	Percent
16	628	26.5
17	724	30.5
18	465	19.6
19	320	13.5
20	234	9.9

ERACE	Frequency	Percent
1	2086	88.0
2	233	9.8
3	30	1.3
4	13	0.5
9	9	0.4

HIWGHT	Frequency	Percent
LOW AFQT	780	32.9
HIGH AFQT	1591	67.1

/* Parental Demographics */

PSEXSAMP	Frequency	Percent
Male	1092	46.1
Female	1279	53.9

PDMILSER	Frequency	Percent
1	640	27.0
2	1730	73.0

Frequency Missing = 1

Appendix C

Correlation Matrices for the Youth and Linked Army Enlistment Models

Appendix C

Correlation Matrices for Youth and Linked Army Enlistment Models

This appendix provides the matrix of unweighted correlations among the variables used in estimating the youth Army enlistment model and the linked youth and parent Army enlistment model, discussed in Chapter 6. Table C-1 contains the correlation matrix for the youth model, while Table C-2 contains the correlation matrix for the linked model. Each table also contains a legend crosswalking the matrix row and column headings with the relevant variables.

Table C-1.
Correlation Matrix for the Youth Army Model

	Y1	Y2	ARMY	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X21
Y1	1.00																					
Y2	-0.44	1.00																				
ARMY	0.39	--	1.00																			
X1	0.17	0.20	0.22	1.00																		
X2	0.14	0.18	0.17	0.44	1.00																	
X3	0.17	0.23	0.22	0.44	0.51	1.00																
X4	0.17	0.23	0.22	0.42	0.46	0.58	1.00															
X5	0.18	0.21	0.18	0.39	0.47	0.52	0.58	1.00														
X6	0.15	0.17	0.18	0.42	0.43	0.49	0.46	0.48	1.00													
X7	0.21	0.25	0.24	0.45	0.50	0.59	0.60	0.60	0.48	1.00												
X8	0.17	0.25	0.27	0.45	0.49	0.57	0.56	0.53	0.50	0.56	1.00											
X9	0.19	0.24	0.21	0.41	0.50	0.61	0.62	0.56	0.50	0.66	0.58	1.00										
X10	0.21	0.23	0.23	0.49	0.55	0.51	0.56	0.53	0.48	0.59	0.54	0.54	1.00									
X11	0.14	0.20	0.19	0.45	0.54	0.53	0.53	0.51	0.46	0.53	0.51	0.53	0.62	1.00								
X12	-0.14	-0.20	-0.19	-0.04	-0.02	-0.02	-0.06	-0.00	-0.01	-0.03	-0.03	-0.04	-0.03	-0.02	1.00							
X13	-0.01	-0.08	-0.08	0.11	-0.02	0.06	0.04	-0.02	0.07	0.01	-0.04	0.01	-0.03	-0.03	-0.10	1.00						
X14	-0.02	-0.02	-0.03	0.03	0.03	-0.01	-0.03	0.04	-0.02	-0.02	0.04	-0.02	0.06	0.02	0.22	-0.33	1.00					
X15	0.23	0.27	0.29	0.16	0.10	0.16	0.14	0.14	0.13	0.18	0.14	0.11	0.12	0.12	-0.06	0.02	0.02	1.00				
X16	-0.13	-0.19	-0.22	0.01	-0.09	-0.03	-0.06	0.07	0.03	-0.09	-0.05	-0.06	-0.11	0.09	-0.03	0.68	-0.12	0.00	1.00			
X17	0.23	0.39	0.39	0.19	0.22	0.23	0.27	0.23	0.18	0.25	0.25	0.20	0.24	0.22	-0.03	-0.16	0.07	0.22	-0.20	1.00		
X18	0.27	0.40	0.41	0.17	0.22	0.18	0.24	0.22	0.12	0.23	0.22	0.20	0.23	0.19	-0.07	-0.20	0.06	0.21	-0.23	0.67	1.00	
X21	0.24	0.34	0.36	0.21	0.24	0.22	0.21	0.25	0.19	0.27	0.27	0.25	0.31	0.24	-0.02	-0.09	0.02	0.16	-0.16	0.25	0.28	1.00

Legend:

Y1	Military intent	X9	Self-confidence
Y2	Enlistment	X10	Training
ARMY	Army intent	X11	High quality
X1	Cash for education	X12	Work intent
X2	High-tech equipment	X13	College intent
X3	Leadership	X14	Work behaviors
X4	Maturity	X15	Army behaviors
X5	Mental challenge	X16	College behaviors
X6	Physical challenge	X17	Father attitude toward youth enlistment
X7	Potential	X18	Mother attitude toward youth enlistment
X8	Proud experience	X21	Similar people enlist

Table C-2.
Correlation Matrix for the Linked Youth-Parent Army Model

	Y1	Y2	ARMY	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	PX17	PX21	PX20	PX1	PX2
Y1	1.00																		
Y2	-0.44	1.00																	
ARMY	-0.39	- -	1.00																
X1	0.17	0.20	0.22	1.00															
X2	0.14	0.18	0.17	0.44	1.00														
X3	0.17	0.23	0.22	0.44	0.51	1.00													
X4	0.17	0.23	0.22	0.42	0.46	0.58	1.00												
X5	0.18	0.21	0.18	0.39	0.47	0.52	0.58	1.00											
X6	0.15	0.17	0.18	0.42	0.43	0.49	0.46	0.48	1.00										
X7	0.21	0.25	0.24	0.45	0.50	0.59	0.60	0.60	0.48	1.00									
X8	0.17	0.25	0.27	0.45	0.49	0.57	0.56	0.53	0.50	0.56	1.00								
X9	0.19	0.24	0.21	0.41	0.50	0.61	0.62	0.56	0.50	0.66	0.58	1.00							
X10	0.21	0.23	0.23	0.49	0.55	0.51	0.56	0.53	0.48	0.59	0.54	0.54	1.00						
X11	0.14	0.20	0.19	0.45	0.54	0.53	0.53	0.51	0.46	0.53	0.51	0.53	0.62	1.00					
PX17	0.05	0.05	0.03	-0.01	-0.01	-0.03	0.01	-0.02	0.00	0.00	0.01	-0.01	0.00	-0.02	1.00				
PX21	0.38	0.32	0.29	0.10	0.08	0.07	0.09	0.09	0.05	0.11	0.09	0.07	0.13	0.07	0.23	1.00			
PX20	0.20	0.17	0.17	0.10	0.09	0.08	0.10	0.08	0.05	0.08	0.09	0.07	0.12	0.08	0.15	0.53	1.00		
PX1	0.14	0.14	0.17	0.14	0.11	0.11	0.11	0.14	0.06	0.12	0.09	0.10	0.13	0.14	-0.02	0.19	0.23	1.00	
PX2	0.12	0.13	0.14	0.10	0.18	0.11	0.12	0.13	0.04	0.11	0.12	0.09	0.13	0.12	-0.02	0.17	0.18	0.54	1.00
PX3	0.15	0.18	0.18	0.10	0.15	0.13	0.13	0.16	0.06	0.13	0.15	0.11	0.13	0.14	-0.01	0.19	0.22	0.54	0.66
PX4	0.20	0.17	0.19	0.09	0.12	0.10	0.14	0.16	0.06	0.14	0.14	0.11	0.16	0.13	0.00	0.20	0.19	0.54	0.54
PX5	0.16	0.16	0.18	0.10	0.13	0.10	0.14	0.15	0.04	0.13	0.14	0.10	0.16	0.12	-0.04	0.17	0.19	0.52	0.60
PX6	0.14	0.16	0.18	0.10	0.11	0.11	0.11	0.13	0.06	0.13	0.14	0.10	0.10	0.10	0.01	0.20	0.21	0.50	0.54
PX7	0.17	0.19	0.20	0.11	0.14	0.12	0.16	0.13	0.06	0.13	0.16	0.12	0.17	0.15	-0.06	0.18	0.25	0.54	0.61
PX8	0.14	0.17	0.18	0.09	0.14	0.12	0.12	0.15	0.06	0.14	0.14	0.10	0.13	0.13	-0.03	0.20	0.19	0.55	0.57
PX9	0.17	0.17	0.19	0.11	0.15	0.13	0.17	0.16	0.06	0.16	0.16	0.15	0.16	0.13	-0.01	0.16	0.22	0.54	0.58
PX10	0.14	0.17	0.19	0.10	0.15	0.13	0.13	0.13	0.07	0.14	0.14	0.12	0.14	0.16	-0.04	0.15	0.20	0.56	0.65
PX11	0.12	0.16	0.18	0.13	0.16	0.11	0.14	0.15	0.06	0.12	0.13	0.11	0.14	0.14	-0.03	0.15	0.20	0.58	0.69
X12	-0.14	-0.20	-0.19	-0.04	-0.02	-0.02	-0.06	-0.00	-0.01	-0.03	-0.03	-0.04	-0.03	-0.02	0.01	-0.02	0.01	-0.03	-0.02
X13	-0.01	-0.08	-0.08	0.11	-0.02	0.06	0.04	-0.02	0.07	0.01	0.04	0.01	-0.03	-0.03	0.06	-0.11	-0.07	-0.08	-0.10
X14	-0.02	-0.02	-0.03	-0.03	0.03	-0.01	-0.03	0.04	-0.02	-0.02	0.04	-0.02	0.06	0.02	0.00	0.11	0.09	0.02	0.01
X15	0.23	0.27	0.29	0.16	0.10	0.16	0.14	0.14	0.13	0.18	0.14	0.11	0.12	0.12	0.03	0.21	0.17	0.07	0.05
X16	-0.13	-0.19	-0.22	0.01	-0.09	-0.03	-0.06	-0.07	0.03	-0.09	-0.05	-0.06	-0.11	-0.09	0.11	-0.09	-0.06	-0.15	-0.15
X17	0.23	0.39	0.39	0.19	0.22	0.23	0.27	0.23	0.18	0.25	0.25	0.20	0.24	0.22	0.02	0.24	0.21	0.21	0.14
X18	0.27	0.40	0.41	0.17	0.22	0.18	0.24	0.22	0.12	0.23	0.22	0.20	0.23	0.19	-0.04	0.26	0.21	0.20	0.17
X21	0.24	0.34	0.36	0.21	0.24	0.22	0.21	0.25	0.19	0.27	0.27	0.25	0.31	0.24	-0.02	0.13	0.09	0.15	0.11
PX14	-0.02	-0.04	-0.02	-0.04	-0.01	-0.02	-0.05	0.00	-0.04	-0.04	-0.02	-0.02	-0.05	-0.01	0.04	-0.07	-0.04	0.03	0.09
PX12	-0.11	-0.13	-0.12	-0.09	-0.20	-0.07	-0.08	-0.10	-0.04	-0.10	-0.11	-0.08	-0.13	-0.14	0.11	-0.08	-0.07	-0.15	-0.18

Table C-2 (Continued).

	PX3	PX4	PX5	PX6	PX7	PX8	PX9	PX10	PX11	X12	X13	X14	X15	X16	X17	X18	X21	PX14	PX12
PX3	1.00																		
PX4	0.63	1.00																	
PX5	0.66	0.65	1.00																
PX6	0.59	0.60	0.58	1.00															
PX7	0.68	0.66	0.74	0.56	1.00														
PX8	0.66	0.65	0.63	0.64	0.66	1.00													
PX9	0.68	0.70	0.68	0.58	0.76	0.64	1.00												
PX10	0.66	0.65	0.68	0.56	0.71	0.62	0.64	1.00											
PX11	0.66	0.62	0.68	0.57	0.68	0.65	0.63	0.75	1.00										
X12	0.07	0.05	0.06	0.06	0.04	0.05	0.05	0.06	0.04	1.00									
X13	0.06	0.09	0.15	0.07	0.14	0.12	0.12	0.13	0.12	-0.10	1.00								
X14	0.00	0.04	0.06	0.01	0.06	0.02	0.03	0.04	0.02	-0.22	0.33	1.00							
X15	0.09	0.08	0.07	0.05	0.08	0.09	0.07	0.07	0.07	0.06	-0.02	0.02	1.00						
X16	-0.11	-0.13	-0.19	-0.12	-0.18	-0.14	-0.13	-0.17	-0.17	0.03	-0.68	-0.12	0.00	1.00					
X17	0.19	0.19	0.19	0.18	0.20	0.19	0.19	0.17	0.16	0.03	0.16	0.07	0.22	-0.20	1.00				
X18	0.19	0.19	0.21	0.17	0.22	0.20	0.20	0.21	0.19	0.07	0.20	0.06	0.21	-0.23	0.67	1.00			
X21	0.17	0.17	0.17	0.11	0.17	0.15	0.17	0.16	0.16	0.02	0.09	0.02	0.16	-0.16	0.25	0.28	1.00		
PX14	0.02	0.01	0.07	0.06	0.05	0.04	-0.03	0.08	0.10	0.03	0.03	0.00	0.03	-0.03	-0.11	-0.05	-0.06	1.00	
PX12	-0.17	-0.12	-0.22	-0.12	-0.21	-0.17	-0.14	-0.20	-0.22	0.03	-0.25	-0.13	-0.07	0.26	-0.11	-0.17	-0.14	-0.14	1.00

Legend:

Y1	Military intent	X10	Training	PX11	Parent high quality
Y2	Enlistment	X11	High quality	PX12	Parent income
ARMY	Army intent	PX1	Parent cash for education	PX13	Parent education
X1	Cash for education	PX2	Parent hi-tech	PX14	Parent military service
X2	High-tech equipment	PX3	Parent leadership	PX15	Frequency of talks with youth
X3	Leadership	PX4	Parent maturity	PX16	Parent gives opinions
X4	Maturity	PX5	Parent mental challenge	PX17	Parent talk about future
X5	Mental challenge	PX6	Parent physical challenge	PX18	Parent points out service ads
X6	Physical challenge	PX7	Parent potential	PX19	Parent suggests see recruiter
X7	Potential	PX8	Parent proud experience	PX20	Parent encouragement
X8	Proud experience	PX9	Parent self-confidence	PX21	Frequency of talks
X9	Self-confidence	PX10	Parent training		

Appendix D

LISREL Parameter Estimates for the Youth and Linked General Military Enlistment Models

Appendix D

LISREL Parameter Estimates for the Youth and Linked General Military Enlistment Model

This appendix provides the formal specification used in estimating the youth and linked youth and parent general military enlistment model. The full LISREL model estimates elements for eight parameter matrices. The specification of which elements to estimate or set to a predetermined value is provided in the LISREL model statement. The eight matrices can be summarized as:

- Lambda Y. A matrix specifying the endogenous measurement model. This matrix details the linkages between the observed endogenous variables and their latent constructs.
- Lambda X. A matrix specifying the exogenous measurement model. This matrix details the linkages between the observed exogenous variables and their latent constructs.
- Beta. A matrix specifying the structural relations among endogenous latent variables.
- Gamma. A matrix specifying the structural relations between exogenous latent variables and endogenous latent variables.
- PSI. A matrix of error terms for endogenous latent variables.
- PHI. A matrix of error terms for exogenous latent variables.
- Theta-Epsilon. A matrix of error terms for endogenous observed variables.
- Theta-Delta. A matrix of error terms for exogenous observed variables.

Figures D-1 and D-2 present the youth and linked youth and parent general military enlistment models. The remainder of this appendix contains the correlation matrix of observed model variables, followed by specifications for each of the eight matrices discussed above. The specifications observed the following conventions: (1) matrix elements set to 1.0 are set to the value in the LISREL model, (2) matrix elements set to * are free elements to be estimated by LISREL, and (3) matrix elements set to - - are fixed at zero and not estimated by LISREL.

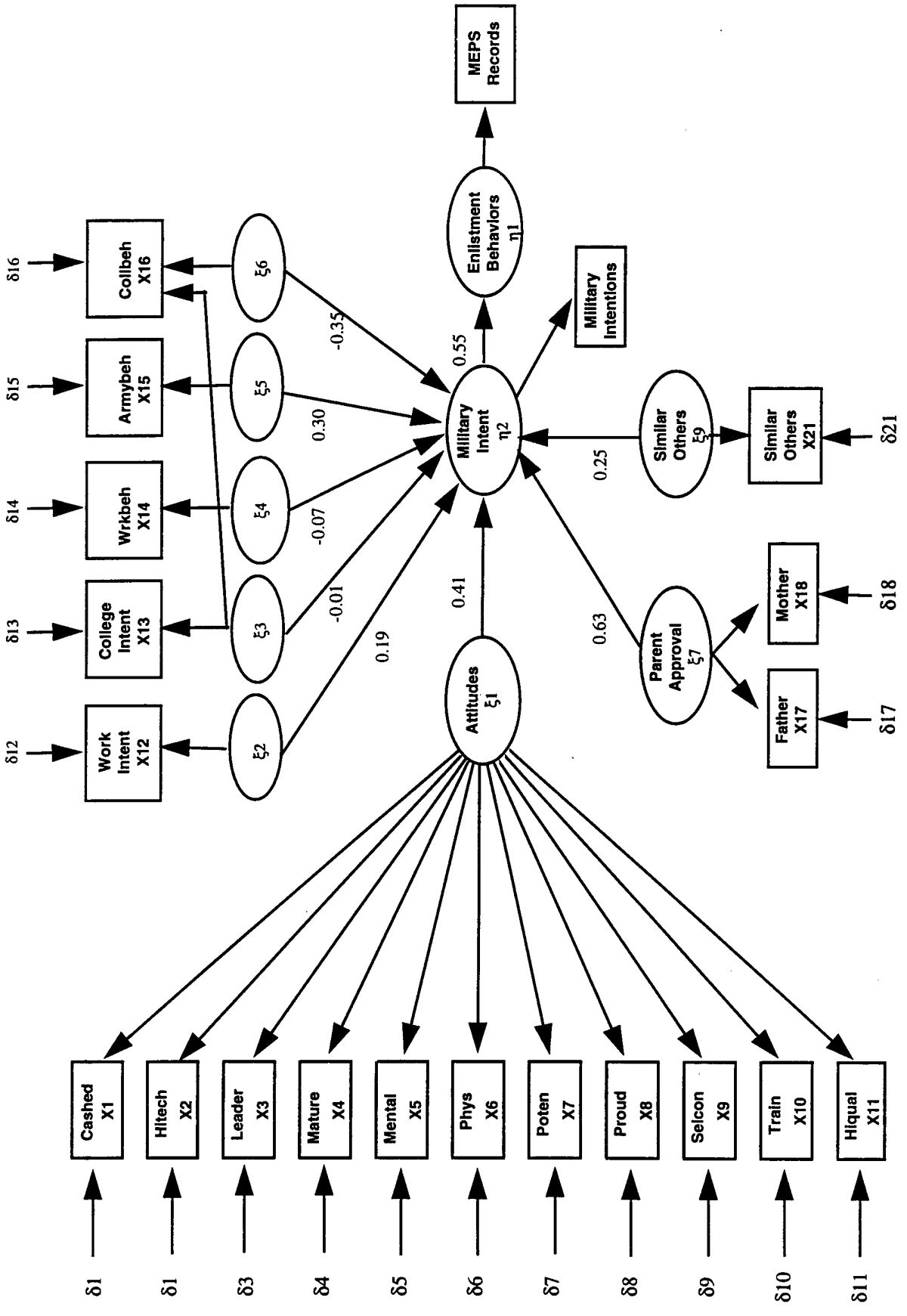

Figure D-1. Final ACOMS youth general military enlistment model.

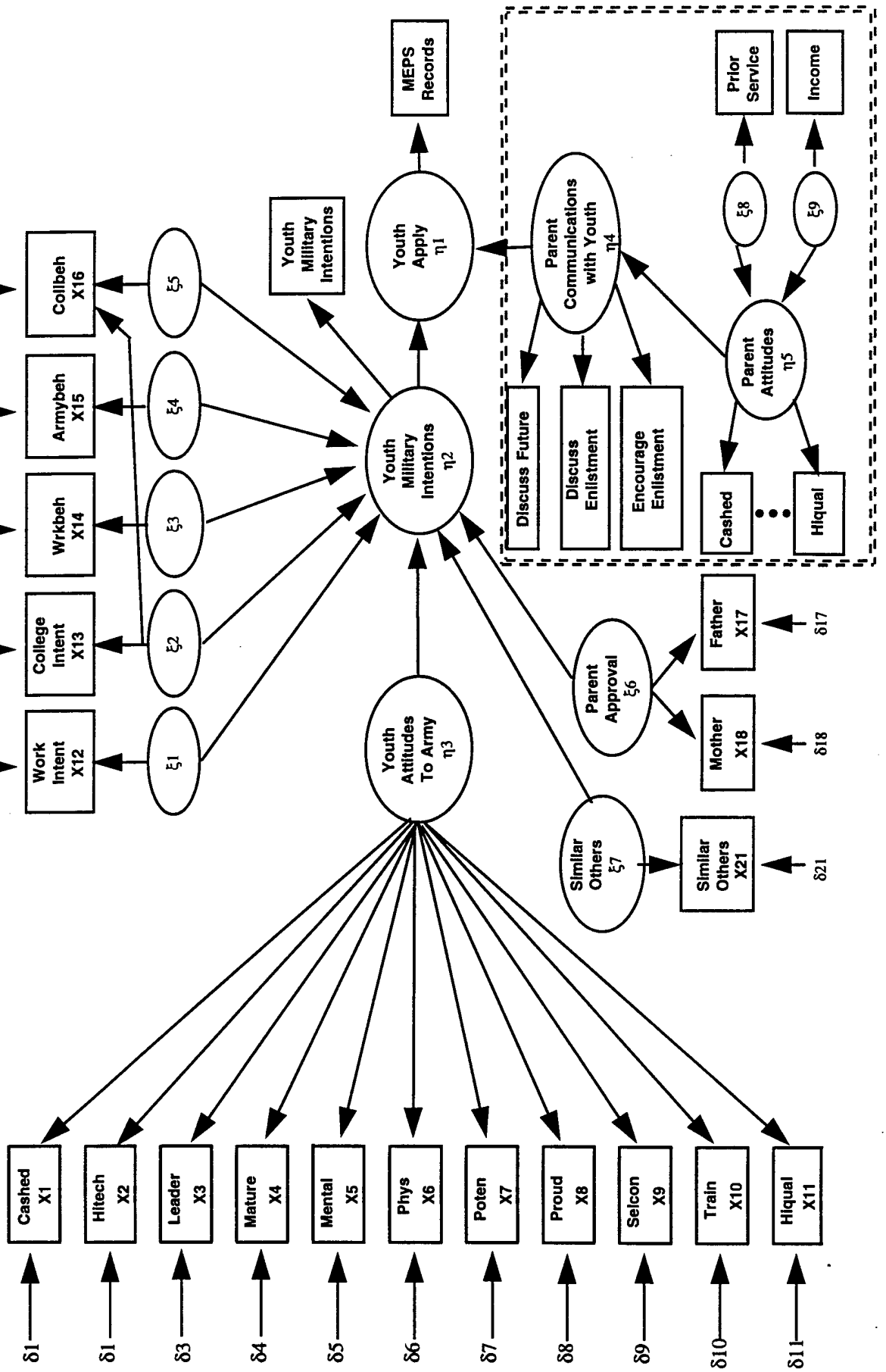

Figure D-2. Final ACOMS linked parent-youth general military enlistment model.

SQUARED MULTIPLE CORRELATIONS FOR STRUCTURAL EQUATIONS

ETA 1	ETA 2
0.24	0.68

GOODNESS OF FIT STATISTICS

CHI-SQUARE WITH 184 DEGREES OF FREEDOM = 1046.10 (P = 0.0)

ROOT MEAN SQUARE ERROR OF APPROXIMATION (RMSEA) = 0.047

ROOT MEAN SQUARE RESIDUAL (RMR) = 0.100

STANDARDIZED RMR = 0.100

GOODNESS OF FIT INDEX (GFI) = 0.97

ADJUSTED GOODNESS OF FIT INDEX (AGFI) = 0.96

LAMBDA-Y

	ETA 1	ETA 2
Y1	1.00	--
Y2	--	1.00

LAMBDA-X

	KSI 1	KSI 2	KSI 3	KSI 4	KSI 5	KSI 6	KSI 7	KSI 8
X1	1.00	--	--	--	--	--	--	--
X2	1.13 (0.03) 39.19	--	--	--	--	--	--	--
X3	1.25 (0.03) 45.93	--	--	--	--	--	--	--
X4	1.24 (0.03) 44.29	--	--	--	--	--	--	--
X5	1.21 (0.03) 43.16	--	--	--	--	--	--	--
X6	1.11 (0.03) 40.45	--	--	--	--	--	--	--
X7	1.31 (0.03) 44.82	--	--	--	--	--	--	--
X8	1.22 (0.03) 42.74	--	--	--	--	--	--	--

LAMBDA-X (CONTINUED)

	KSI 1	KSI 2	KSI 3	KSI 4	KSI 5	KSI 6	KSI 7	KSI 8
X9	1.34 (0.03) 44.96	--	--	--	--	--	--	--
X10	1.32 (0.03) 46.25	--	--	--	--	--	--	--
X11	1.24 (0.03) 42.46	--	--	--	--	--	--	--
X12	--	1.00	--	--	--	--	--	--
X13	--	--	1.00	--	--	--	--	--
X14	--	--	--	1.00	--	--	--	--
X15	--	--	--	--	1.00	--	--	--
X16	--	--	-0.59 (0.03) -20.43	--	--	1.00	--	--
X17	--	--	--	--	--	--	1.00	--
X18	--	--	--	--	--	--	1.23 (0.09) 13.60	-- -- --
X21	--	--	--	--	--	--	--	1.00

BETA

	ETA 1	ETA 2
ETA 1	--	0.55 (0.05) 11.47
ETA 2	--	--

GAMMA

	KSI 1	KSI 2	KSI 3	KSI 4	KSI 5	KSI 6	KSI 7	KSI 8
ETA 1	--	--	--	--	--	--	--	--
ETA 2	0.41	0.19	-0.01	-0.07	0.30	-0.35	0.63	0.25
	(0.03)	(0.03)	(0.03)	(0.04)	(0.04)	(0.07)	(0.11)	(0.05))
	13.04	5.67	-0.41	-1.79	6.73	-5.22	5.59	5.57

PSI

	ETA 1	ETA 2
	0.76	0.26
	(0.04)	(0.06)
	20.84	4.28

PHI

	KSI 1	KSI 2	KSI 3	KSI 4	KSI 5	KSI 6	KSI 7	KSI 8
KSI 1	0.39 (0.02) 23.73							
KSI 2	--	1.00 (0.03) 32.37						
KSI 3	--	--	1.00 (0.03) 32.37					
KSI 4	--	--	--	1.00 (0.03) 32.37				
KSI 5	--	--	--	--	1.00 (0.03) 32.37			
KSI 6	--	--	--	--	--	0.65 (0.04) 15.52		
KSI 7	--	--	--	--	--	--	0.45 (0.04)	
KSI 8	0.17 (0.01) 15.11	--	--	--	--	--	--	1.00 (0.03) 32.37

THETA-EPS

Y1	Y2
--	0.18
	(0.10)
	1.87

THETA-DELTA

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X21
X1	0.61 (0.04) 17.28																		
X2	--	0.50 (0.04) 13.87																	
X3	--	--	0.39 (0.03) 1.21																
X4	--	--	--	0.39 (0.03) 11.35															
X5	--	--	--	--	0.43 (0.03) 12.43														
X6	--	--	--	--	--	0.51 (0.04) 14.46													
X7	--	--	--	--	--	--	0.32 (0.03) 9.33												
X8	--	--	--	--	--	--	--	0.41 (0.04) 11.67											

THETA-DELTA (CONTINUED)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17	X18	X21
X9	--	--	--	--	--	--	--	--	0.29 (0.03) 8.36										
X10	--	--	--	--	--	--	--	--	--	0.31 (0.03) 9.12									
X11	--	--	--	--	--	--	--	--	--	--	0.40 (0.04) 11.31								
X12	--	--	--	--	--	--	--	--	--	--	--	--							
X13	--	--	--	--	--	--	--	--	--	--	--	--	--						
X14	--	--	--	--	--	--	--	--	--	--	--	--	--	0.35 (0.03) 11.48					
X15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--				
X16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
X17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.55 (0.05) 10.97		
X18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0.32 (0.06)	
X21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--