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ABSTRACT

Three organizational simulations were developed to assess three levels of military personnel at Army assessment centers. Eleven leadership dimensions were used in the assessment, simulations were developed to elicit behaviors relevant to those dimensions. Procedures and instruments for evaluating the relevant behaviors were developed, as were materials suitable for training assessment center personnel to use in conducting simulations and performing assessments. It was concluded that organizational simulations contribute an aspect to assessment center programs that is not obtainable through other techniques, that simulations are dependent for valid and reliable data upon observance of standard assessment practices, and that their effective use as assessment devices depends upon the competence of the staff responsible for conducting the simulations and making the assessments. (Author)

Technical
Report
73-21

HumRRO

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Development of Leadership Assessment Simulations

CE

Joseph A. Olmstead, Fred K. Cleary,
Larry L. Lackey, and James A. Salter

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September 1973

Prepared for

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1300 Wilson Boulevard
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HumRRO Division No. 4
Fort Benning, Georgia

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The Human Resources Research Organization (HumRRO) is a nonprofit corporation established in 1969 to conduct research in the field of training and education. It is a continuation of The George Washington University Human Resources Research Office. HumRRO's general purpose is to improve human performance, particularly in organizational settings, through behavioral and social science research, development, and consultation.

The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

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FOREWORD

This report describes activities performed by the Human Resources Research Organization (HumRRO) for a project with the overall objective of developing leadership simulation scenarios, procedures, and materials to be used by the U.S. Army Infantry School Assessment Center in assessing the attributes and capabilities of three different levels of military personnel. The project was conducted by HumRRO for the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI).

Work on the project was begun in March 1973 and completed in October 1973, and was conducted by HumRRO Division No. 4, Fort Benning, Georgia. Dr. T.O. Jacobs is Director of Division No. 4 and Dr. Joseph A. Olmstead was Project Director. The research staff consisted of LTC (Ret) Fred K. Cleary, Dr. Larry L. Lackey, and Mr. James A. Salter. Listing of the staff members here and as junior authors of this report is alphabetical; all contributed equally to the outcome of the project.

Dr. Kay H. Smith is Chief of the ARI Field Unit at Fort Benning and served as technical monitor of the project. The advice and assistance of Dr. Smith and the Fort Benning ARI staff is gratefully acknowledged. Military personnel at the U.S. Army Infantry School Assessment Center provided consultation on technical content of the simulations. COL Wallace F. Veaudry is Director of the Assessment Center.

The work was performed under Contract No. DAHC 19-73-C-0038, Design and Development of Leadership Scenarios.

Meredith P. Crawford
President
Human Resources Research Organization

SUMMARY AND CONCLUSIONS

PROBLEM

The U.S. Army has established an Assessment Center pilot program at Fort Benning, Georgia. The purpose of the program is to evaluate the feasibility of assessment centers for the Army. To accomplish this purpose, it was decided to develop and evaluate full procedures for evaluating the following levels of personnel: (a) student noncommissioned officers entering the Noncommissioned Officer Educational System (NCOES) senior program, (b) students entering the Infantry Officer Basic Course (IOBC) and the Branch Immaterial Officer Candidate Course (OCS), and (c) student officers entering the Infantry Officer Advanced Course (IOAC). The pilot plan encompasses development and evaluation of three complete assessment programs, one for each of the above levels.

HumRRO was requested to design and develop three leadership assessment simulation modules to be used in the assessment programs for the respective levels of personnel. Products of the research were to be (a) the "scenarios" of simulations appropriate for the three levels of personnel, to include the procedures and materials necessary to effectively conduct the simulations; (b) assessment procedures and instruments to be used with the simulations; and (c) procedures and materials needed to train assessment center personnel to conduct the simulations and use the associated assessment procedures.

APPROACH

The approach used was to (a) specify a set of leadership dimensions upon which to evaluate the personnel to be assessed; (b) develop simulations designed specifically to elicit behaviors relevant to the identified dimensions; (c) develop procedures and instruments for evaluating the relevant behaviors; and (d) develop materials suitable for training assessment center personnel to conduct the simulations and to perform the associated assessments.

RESULTS

Fourteen leadership dimensions were identified as appropriate for assessment and 11 were determined to be suitable for assessment by simulation. Three organizational simulations were developed to assess military personnel on the 11 dimensions.

Two of these simulations were designed within the context of combat operations. In the Senior Noncommissioned Officer Simulation (NCOES), the assessee performs the role of platoon sergeant and acting leader of a detached platoon engaged in stability operations. In the Senior Company-Grade Officer Simulation (IOAC), the assessee performs the role of the commander of a company that is part of an Infantry battalion engaged in stability operations.

Because of the lack of technical knowledge anticipated for entering OCS and IOBC students, the Junior Company-Grade Officer Simulation (OCS-IOBC) was designed within a non-combat context. In this simulation the assessee performs the role of the leader of a platoon engaged in civil-disaster assistance in a city in the southeastern United States.

Each simulation lasts four or five hours, during which assessee experience a variety of problems under continually increasing environmental pressure. Their actions in

response to the problems are evaluated by assessors on the bases of preestablished criteria of effectiveness. During the course of the simulations, 111, 117, and 124 scores are obtained for NCOES, OCS-IOBC, and IOAC assesseees respectively. Thus, a large number of scores with repeated measurements of most dimensions are obtained.

The final products were three separate "simulation modules," each of which contains;

- (1) Full instructions and materials for conducting the simulation.
- (2) Full procedures and materials for conducting the assessments associated with the simulations.
- (3) Full instructions and materials for training center personnel, for conducting the simulations and using the assessment procedures and instruments.

CONCLUSIONS

- (1) Organizational simulations possess the capability of effectively creating environments characteristic of complex hierarchical organizations and, through their emphasis upon performance in such environments, provide a contribution to the assessment process that cannot be obtained with any other technique.
- (2) Like all assessment techniques, simulations are dependent for valid and reliable data upon observance of standard assessment practices, such as uniform conditions for all assesseees and strict adherence to protocols concerned with administration of stimulus materials and scoring of responses.
- (3) The effective use of simulations as assessment devices depends upon the competence of the staff responsible for conducting the simulations and making the assessments. This competence is achieved mainly through intensive training in use of the procedures and materials.

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Development of Leadership Assessment Simulations

Chapter 1

INTRODUCTION

MILITARY PROBLEM

The U.S. Army has established an Assessment Center pilot program at The Infantry School, Fort Benning, Georgia. The purpose of the program is to evaluate the feasibility of assessment centers for the Army. To accomplish this purpose, it was decided to develop and evaluate full procedures for assessing three separate levels of personnel. In the pilot program, student noncommissioned officers entering the Noncommissioned Officer Educational System (NCOES) senior program and student officers entering the Infantry Officer Advanced Course (IOAC) will be assessed for purposes of career counseling. Students entering the Infantry Officer Basic Course (IOBC) and Branch Inmaterial Officer Candidate Course (OCS) will be assessed from a selection perspective. Included in the pilot program will be follow-up evaluations of assessed individuals in order to determine the validity of assessment procedures and the efficacy of assessment centers for improving selection and career development.

In effect, the pilot plan encompasses development and evaluation of three complete assessment programs, one for each of the above levels of personnel. As planned, the assessment process for each program was to include the use of realistic simulations of military leadership situations. According to the plan, a total of three simulations would be required, one for each of the relevant levels of personnel.

RESEARCH PROBLEM

In support of the U.S. Army Assessment Center pilot program, HumRRO was requested to design and develop "scenarios" for the three simulations required by the Center. Each simulation was required to reflect the content and level of difficulty appropriate for the personnel who would be exposed to it.

Specific objectives of the research were to:

- (1) Provide model scenario modules appropriate in content and difficulty for personnel in the Infantry School courses in which the assessment centers are to be implemented. The courses are NCOES senior program, OCS-IOBC, and IOAC.¹
- (2) Test the modules under operational conditions, using samples of the appropriate populations.
- (3) Provide (a) advisory service, extending beyond delivery of the model scenarios, in integrating the simulations into the assessment process; and (b) technical services in training of assessors.

¹ Although the simulations are designated throughout this report as NCOES, OCS-IOBC, and IOAC, each was designed to be appropriate for a particular level of expertise rather than a specific student group and they are not intended to be limited to use solely with students of the respective courses.

In addition to the technical report, products of the project were to include:

- (1) Three "scenarios" of simulations appropriate for the relevant levels of personnel. "Scenarios" was interpreted to include the procedures and materials necessary to effectively conduct the simulations.
- (2) Assessment procedures and instruments to be used with the above simulations.
- (3) Procedures and materials needed to train assessment center personnel to conduct the simulations and employ the associated assessment procedures.

BACKGROUND

The concept of an "assessment center" involves the prediction of managerial or leader behavior by use of multiple methods of evaluation. In general, typical procedures included:

- (1) The use of multiple methods for obtaining information on individuals.
- (2) Standardization of these methods and of techniques of making inferences from this information.
- (3) The use of several assessors, whose judgments are then pooled in arriving at evaluations of the individuals who are assessed.

Typically, persons to be assessed are assigned, for periods of several days, to centers where they are exposed to a full spectrum of tests and evaluated by a staff of assessors. Assessment results may be used in selecting individuals for further training or for promotion and/or in counseling for career development. Currently, assessment centers are being widely used within business, industry, and some areas of government for both selection and career counseling purposes. In general, multiple assessment procedures have been reported to be superior to any single method of assessment.

In the typical assessment center, intensive data-gathering methods are employed, with the complete range of techniques including paper-and-pencil tests, biographical data, interviews, games, and situational tests (e.g., work samples, group problem solving, and leaderless discussion groups). However, inclusion of complex organizational simulations in assessment center techniques has not been a common practice. Only one organization, The Center for Creative Leadership, Greensboro, North Carolina, could be identified as including a complex simulation within its armamentarium of assessment methods. Representatives of this organization have expressed the view that simulation adds materially to the value of the assessment process.

Reasons for the exclusion of simulations by most assessment centers are not entirely clear, although several possible constraints are readily apparent. The design of an effective simulation is a difficult and time-consuming task that requires considerable expertise in both organizational dynamics and test methodology. Furthermore, any worthwhile simulation requires a sizable block of time to administer and, depending upon the types of organizations and situations that are simulated, may require numbers of personnel to conduct.

On the other hand, benefits to be derived from simulations appear to outweigh the disadvantages. A simulation offers opportunity to observe actual behavior of assessees within the context of a realistically functioning organization, an opportunity that is not available from other assessment techniques. In addition, a well-designed simulation provides opportunity for repeated observations on target dimensions, thus greatly increasing the reliability of measurements. Finally, a simulation permits evaluation on a variety of dimensions, whereas most other methods are limited to measurement of only one or a few dimensions. In general, it can be said that organizational simulations provide unique opportunities for assessment that can be achieved through no other technique.

Chapter 2

METHOD

The approach used was to (a) specify a set of leadership dimensions upon which to evaluate the personnel to be assessed, (b) design and develop simulations that would elicit behaviors relevant to the identified dimensions, (c) develop procedures and instruments for evaluating the relevant behaviors, and (d) develop materials suitable for training assessment center personnel to conduct the simulations and to perform the associated assessments. In addition, it was planned to train personnel of the Fort Benning Assessment Center to use the materials effectively.

SPECIFICATION OF LEADERSHIP DIMENSIONS

The first step involved specification of the leadership dimensions upon which assessments were to be based. This step included identification of all dimensions to be covered by the total assessment process for each program—not just those that would be relevant for simulations. Specification was accomplished by a working group comprised of Army Research Institute (ARI) staff members at Fort Benning, military personnel of the Assessment Center, and HumRRO project team members.

HumRRO conducted a survey of (a) literature concerned with management and leadership; (b) studies of leadership conducted within the Army, with special emphasis upon work by ARI, HumRRO, and the U.S. Army War College; and (c) literature concerned with assessment centers. In addition, several assessment centers were visited.

The products of the survey were analyzed and a list of candidate dimensions was derived. Bases for inclusion in the list were (a) consensus in the literature and Army studies as to relevance of a dimension for effective leadership, and (b) apparent potential of the dimension for valid and reliable measurement within an assessment center context.

The candidate dimensions were then evaluated by members of the working group, on the bases of relevance for military leadership and for the particular levels of personnel to be assessed by the programs. The result was a final list of leadership dimensions that were, in effect, descriptive labels for attributes to be assessed.

For each dimension, one or more “general indicators” were also developed. General indicators are sub-dimensions that provide some added degree of specificity to the dimensions and can be clustered for derivation of dimension scores.

General indicators are merely devices for making definitions of dimensions more specific. In this project, they provided guidance for designing problem situations and scoring protocols that would be suitable for assessing the various dimensions. However, from the simulations, scores were derived only for dimensions and no effort was made to insure that all general indicators were represented in the final assessment materials or that scores were distributed equally among those that were represented.

After establishment of the dimensions that would be measured in the total assessment process, a determination was made of those that could be reasonably measured through the use of simulation. Development of methods for assessing those dimensions judged to be measurable through simulation was the principal thrust of the effort described in this report.

DEVELOPMENT OF SIMULATIONS

The mission of HumRRO was to develop three simulations, each to be appropriate in content and difficulty for a single level of Army personnel. As planning by the Assessment Center evolved, it was determined that personnel for whom the simulations should be relevant were the following:

- (1) Entering students in the senior course of the Noncommissioned Officer Educational System (NCOES). It was anticipated that these personnel would be mainly in grades E5 and E6, and that their military backgrounds would vary widely.
- (2) Entering students in the Officer Candidate (OCS) program and the Infantry Officer Basic Course (IOBC). Such students could be experienced enlisted personnel, individuals who had only recently completed BCT or AIT, officers newly commissioned from ROTC, or officers recently graduated from the U.S. Military Academy.
- (3) Entering students in the Infantry Officer Advanced Course (IOAC). These students are usually captains or majors, with a number of years' experience as officers.

Planning Decisions

Throughout the developmental process, it was necessary to consider a number of issues whose resolution greatly influenced the content, design, and ultimate quality of the simulations and other products. These issues were resolved through joint decisions by HumRRO staff members, ARI personnel, and military representatives of the Assessment Center. Wherever possible, the decisions were made on the bases of good assessment practices; however, in some instances, compromises were necessary because of limitations in time and personnel available for conduct of the various assessment activities.

Contexts of Simulations. Originally, the stated requirement was for three "combat" simulations. However, as planning developed and the nature of the subject populations was explored, it became apparent that even minimal performance in a simulated combat situation would require basic technical knowledge not likely to be possessed by most entering OCS or IOBC students. It was judged that the lack of technical expertise and knowledge of appropriate role requirements would confound performance in the simulation to the extent that effective evaluation of leadership potential would be impossible.

Accordingly, it was decided to develop the Junior Company-Grade Officer Simulation (OCS-IOBC) within the context of a non-combat situation. After some exploration of potential contexts, it was further decided to design the OCS-IOBC simulation within the context of a civil disaster. Through use of this device, it would be possible for assessees to perform as leaders within a military organization but with few requirements for the complex technical and role knowledge characteristic of combat situations.

After similar deliberations with regard to NCOES and IOAC populations, it was determined that combat situations would be appropriate for these personnel.

Geographic Contexts. An important consideration involved the geographical locales of the simulated activities. In order to negate possible biases due to familiarity with the Republic of Vietnam by those individuals who had served there, that area was eliminated as a locale possibility for the combat simulations. Other considerations involved desirable terrain features and the availability of suitable maps. After exploration of a number of possible locales throughout the world, it was decided that Thailand was the best location for the two combat simulations.

With regard to the civil-disaster simulation, a part of the rationale for the presence of an Army unit near the town to be struck by a disaster was that the unit was

conducting Adventure Training in a nearby mountainous area. It was therefore necessary to locate a city of appropriate characteristics, with adequate maps available for both the city and adjacent rural areas. After considerable investigation, it was decided that the locale for the civil-disaster simulation would be Asheboro, North Carolina and vicinity.

Uniformity of Assessee Roles. It is fundamental to good assessment practice that all assesseees be exposed to as nearly identical experiences as possible. Only in this way can comparability between results be fully established. Accordingly, it was decided that, in the simulations, all assesseees should be placed in the same organizational roles and that all should receive identical inputs from controller personnel. Thus, all IOAC assesseees would play the role of Commander, Company A, 1st Battalion, 66th Infantry; all OCS-IOBC assesseees would play Platoon Leader, 1st Platoon, Company A; and all NCOES personnel would play Platoon Sergeant, 1st Platoon, Company A.

In this way, the same problems could be presented to all assesseees within a simulation and all other conditions would also be identical. However, since all assesseees in each group would be performing the same roles, this procedure would preclude the interaction between peers that would be possible in a real organization. It was decided that uniformity of conditions was more desirable, and the simulations were designed so that all assesseees performed identical roles and interaction occurred with superiors and subordinates only.

Number of Assesseees. In early planning, it was determined by the Assessment Center that the optimum number of assesseees to be processed in one assessment period (3 days) would be 18. It developed that the most efficient scheduling would require that simulations be conducted for six assesseees simultaneously. While six assesseees participated in the simulations on each of the three days of the assessment period, the remaining 12 would be involved in other activities.

The number of assesseees to be accommodated simultaneously, together with the number of Center personnel who would be available to serve as controllers, dictated the simulation procedures to some extent. For example, it was determined that a maximum of nine controllers would be available for simulations at any one time—a ratio of three controllers to two assesseees. Since previous experience with simulations indicated that a controller in the roles of unit leaders subordinate to a player can effectively control only one individual, it was concluded that each assessee would require one subordinate-unit controller. On the other hand, it was possible for one superior-level controller to simultaneously control two assesseees—if some usual battalion-level functions were reduced to a minimum. One result of this rationale was elimination from the combat simulations of full-time Battalion Administrative-Logistics radio nets. Instead, Administrative-Logistics nets were opened only for two brief periods. The effect was reduction of exposure to problems concerned with personnel and logistics, with which assesseees would normally be faced in real-world activities.

The final outcome was that each simulation was designed around a basic team of three controller/assessors who conduct simulations and associated assessments for two assesseees. Simultaneous assessment of six assesseees requires three simulation teams, and numbers of individuals to be assessed at any one time can be increased or decreased in units of two merely through addition or deletion of appropriate numbers of three-man teams.

Design Considerations

An assessment simulation is a vehicle intended to elicit behavior in such a manner that the behavior can be reliably and validly evaluated. Within the limits of facilities, personnel, and data-collection requirements, the simulations developed for this project were designed to create genuinely realistic environments that would elicit high levels of

subject involvement and permit maximum spontaneity and interaction between assesseees and controllers.

Scenarios. Development of each simulation began with preparation of a scenario that incorporated a series of events into the available time frame in a logical and realistic sequence. For the combat simulations, events to be included were selected from a file of combat incidents compiled by HumRRO during a number of previous studies. For the civil-disaster simulation, the scenario events were developed by two military personnel who had participated in such operations. All scenarios were written within the framework of real time.

Inputs. From previous research, it was apparent that an organizational simulation is a highly complex situation which requires careful control if valid data are to be efficiently recovered. Furthermore, as contrasted with those used for training purposes, simulations designed for assessment must be very carefully structured to channel behavior in such a way that it will be assessable in terms of predetermined dimensions. Accordingly, a previously-used method of controlling inputs and recovering data was adapted for use with the assessment simulations. The method is based upon the concept of a "probe." A probe is a problem that is designed to stimulate activity by a player and about which data can be recovered separately from that concerned with other probes, if desired. Thus, probes can be planned to elicit a variety of behaviors and to cover a wide spectrum of problems and activities. Probes designed to elicit assessable behaviors and to be scored were designated "critical probes." A minority of probes were designed merely to insure continuity of the simulation and were not to be scored. Such non-scored probes were designated "filters."

Operationally, a probe is a set of inputs consisting of one or more messages designed to provide information about a problem or to stimulate action by an assessee concerning the problem. A single input about a probe is a "probe element" and a probe may consist of any number of elements. Taken together, elements concerning a single probe make up a pattern of information about the problem. They can be inserted from different points in the organization, at different times, and by different sources. They possess an unfolding quality that requires an assessee to assemble all of the information about a probe and interpret it properly before he can act upon it correctly.

A probe element can be either of two types of inputs. The first type consists of "scheduled inputs." These are messages or other controller actions that must be inserted, without exception, at specified times. The second type consists of "contingent inputs," which are messages to be inserted if a player takes certain actions but which are omitted if he does not take the designated actions. Usually, a contingent input is required when a player initiates contact with a controller as the result of an earlier scheduled input by another controller. So that the second controller can know the circumstances underlying the action initiated by the player and the appropriate response to be made to it, he is provided with a "contingent input," which is to be used only if the player takes the anticipated action.

Environmental Pressure. Although the simulations were written to require continuous participation, each was designed to expose assesseees to several degrees of environmental pressure. Manipulations of pressure were accomplished by varying frequency and complexity of inputs between administrative phases of the simulations. The two combat simulations each contained three phases, designed as Low, Moderate, and High Pressure. The civil-disaster simulation was designed in two phases—Low and High Pressure.

Through this design characteristic, it is possible to compare an assessee's performance between phases and, thus, to evaluate his ability to withstand the stresses of environmental pressure.

Assessee Roles. In each simulation, assessee roles were designed to require interaction with both superior and subordinate organizational levels. As a leader of a unit appropriate for his rank and experience, each assessee occupied a simulated command post from which he directed subordinate personnel and communicated with both superior levels and other personnel relevant to the situation. The scenarios were designed so that physical dispersion of the simulated organizations precluded face-to-face interaction, except for one personal visit by the battalion commander in the NCC and IOAC simulations. At one point in each of the three simulations, written operations orders were also inserted. All other communication was by simulated radio.

Communication Nets. To insure reliability of communications and noninterference between transmissions during simultaneous administration of the simulations, it was decided to use the AN/GRA-39 radio set control group to simulate radio communication nets. The three simulations were designed to include the following nets:

- Senior Noncommissioned Officer (NCOES)—
 - (1) Battalion Command-Operations Net
 - (2) Platoon Net
- Junior Company-Grade Officer (OCS-IOBC)—
 - (1) Company and Civilian Agencies Net
 - (2) Platoon Net
- Senior Company-Grade Officer (IOAC)—
 - (1) Battalion Command-Operations Net
 - (2) Company Net

In the case of the two combat simulations, supporting units and individuals (e.g., Fire Support Coordinator) are included in one of two nets as most appropriate. Administrative-Logistics traffic is permitted only during specified time periods and is accomplished over the Command-Operations net through use of a different call sign. These procedures permit accomplishment of the simulations with only two nets per assessee, thus limiting the number of instruments that would be required to manageable numbers (4 per assessee).

Controller Materials. All input materials were compiled in Probe Manuals which serve as the source of controller activity during the simulations. For each controller, two manuals specific to the position were compiled. One manual contained all scheduled inputs for the position and the other contained all contingent inputs. Taken together, input materials for all controllers comprise the basic content of a simulation.

Each input was written on a separate page, which contained identifying information, time to be inserted, insertion instructions, background situation details, text of the message, anticipated recipient actions, and subsequent controller responsibility for reacting to spontaneous inquiries or actions by players. Appendix A shows a set of probe elements as they appear in probe manuals.

Development of Simulation Materials

As discussed previously, development of a simulation began with preparation of a scenario, which provided a framework of a series of incidents in logical and realistic sequence. Incidents were selected on the basis of (a) situational relevance and (b) anticipated potential for eliciting behavior pertinent to one or more of the leadership dimensions. Consultation on technical content was provided by military personnel of the Assessment Center.

Each incident was the basis for development of a probe. Inputs comprising a probe were written to create a situation having demand characteristics that would stimulate behavior which could be evaluated in terms of selected leadership dimensions. In some instances, one input was sufficient to create the desired situation; in others, a number of

inputs were needed. For some probes, assessees had to also use information provided in background materials or in earlier probes. Others were self-contained, with no additional information required.

Thus, from the framework provided by the scenario, specific content of a simulation was developed in the form of controller inputs. Development of specific content involved considerations of military credibility and accuracy, possible assessee responses, spacing according to time required for real-world events to occur, and likelihood of occurrence of desired behavior. Every input was designed to serve a specific purpose related either to assessment objectives or control and advancement of the flow of simulation activities. Development included preparation of background materials necessary to prepare assessees to participate effectively in operational phases of the simulations.

Of particular concern was the perceived necessity for making the simulations minimally susceptible to controller judgment or error. It was recognized that it is impossible to anticipate all possible responses of assessees and, accordingly, good judgment by controllers will always be a requirement to maintain uniform conditions and effective control of the flow of a simulation. However, in the design of inputs, every effort was made to anticipate possible assessee responses and to provide specific guidance to controllers for coping with each eventuality. The outcome was a set of built-in checks and contingent controller responses that reduced controller latitude to a minimum.

The results of the developmental efforts were three simulations which are highly complex in their design characteristics but which include procedures that make administration relatively straightforward when they are executed by well-trained and competent controller teams. The simulations produce large quantities of realistic, observable performance in a form that permits assessment in clear-cut behavioral teams.

DEVELOPMENT OF ASSESSMENT PROCEDURES

Concurrent with preparation of the simulations, procedures and materials for conducting the associated assessments were developed. All decisions and developmental activities were governed by two requirements. First, the assessment systems should provide data about assessees that would be predictive of future performance. Second, the results should be susceptible of interpretation and communication for career-counseling purposes. Although official objectives were selection for OCS-IOBC and counseling for NOES and IOAC, it was decided that results from all three simulations should be appropriate for both purposes.

Structure of Scoring Situations

“Critical probes” are problems upon which scores are obtained. Each critical probe consists of one or more probe elements (controller inputs) and, in most instances, scores were based upon behavioral events which occur in response to single controller inputs. Of course, behavior stimulated by one input may actually be the result of cumulative effects of a series of messages; however, a score for the behavior would be keyed to that input judged most likely to precipitate it.

Structure of Scoring System

Each critical probe element was designed to elicit behavior pertinent to particular leadership dimensions. Since all of the dimensions pertain to aspects of leadership and, therefore, many are closely related, a single behavioral event could be pertinent to more than one dimension. Furthermore, general indicators are actually sub-dimensions, several of which may be applicable to a single instance of behavior. Accordingly, it was possible

to develop several scoring items for many single events. To avoid the imposition of artificial constraints upon the realism and credibility of the simulations, no attempt was made to equalize the number of items for each dimension.

For each critical probe element, appropriate dimensions and general indicators were determined, and a "specific indicator" was written. Specific indicators are behavioral descriptions of actions indicative of particular general indicators and specific to the probe element on which evaluation is conducted. They were included to show the concrete connections between general indicators and associated probe elements. Finally, brief descriptions of all probable responses were prepared, written in terms of behavior relevant to the probe element, that is, as potential actions that might be taken by an assessee in response to or as a result of the input. Each description served as one alternative for a scoring item.

A master list of all scoring items, with their relevant dimensions, general indicators, and specific indicators, was prepared. Then, assessment specialists and military experts jointly developed scoring weights for each item alternative. Following are two examples of scoring items for one probe element, as they appear in a master list:

- Probe Name: Moving Bushes
 Probe Element Number: 29-2-1
 Item 61
 Dimension: Technical and Tactical Competence
 General Indicator: Effective Application of Job Knowledge
 Specific Indicator: Applies Job Knowledge to Tactical or Technical Decisions
1. 3 Demonstrated awareness that the enemy uses the cut-bush technique of movement, and directed some countermeasures.
 2. 1 Demonstrated awareness that the enemy uses the cut-bush technique of movement, but did not direct any countermeasures.
 3. 0 Did not indicate awareness of potential enemy pressure.

- Item 62
 Dimension: Supervisory Skills
 General Indicator: Facilitation of Subordinates' Tasks
 Specific Indicator: Keeps Subordinates Informed
1. 3 Informed all (or all other) squad leaders that the enemy was using the cut-bush technique.
 2. 0 Did not inform squad leaders that the enemy was using the cut-bush technique.

In the above examples, the underlined numbers preceding descriptors are scoring weights assigned to the alternatives. The weighting system is based on a maximum score of three and a minimum score of zero. Following are the scoring weights and general criteria for assignment to actions expected to occur in the simulations:

<u>Weight</u>	<u>Criterion</u>
3	Very effective performance. The action was an effective means of dealing with the specific set of circumstances.
2	Satisfactory performance. The action was a somewhat less effective but still adequate method of dealing with the specific set of circumstances.

<u>Weight</u>	<u>Criterion</u>
1	Marginal performance. The action was minimally adequate for dealing with the specific set of circumstances, with some relevant considerations omitted.
0	Unsatisfactory performance. The action was ineffective or inappropriate for dealing with the specific set of circumstances. Also includes failure to act when action was indicated.

Reality dictated that there should always be effective and ineffective alternatives, that the number of alternative actions would vary from situation to situation, and that the number of possible alternatives should not always encompass the full range of scoring weights. In addition, it seemed reasonable that more than one alternative might receive the same weight. Accordingly, the scoring system was designed so that every item has at least two alternatives, one of which is assigned a weight of "3" and the other "0". However, any item may contain additional alternatives whose weights are determined by relative effectiveness in the problem situation. Under the scoring system, it is possible for every item to receive a maximum score of three and a minimum score of zero.

The system was designed for controllers to also serve as assessors. For each controller position, an Assessor Report booklet that contains all items to be scored by the individual occupying that position was prepared. To eliminate possible bias, dimensions, general indicators, and specific indicators are not shown for items, and weights for the item alternatives are not indicated. Therefore, a controller/assessor who uses the form merely checks the alternative describing the response of an assessee. Weights are assigned to the selected alternatives and scores are computed for the dimensions by other personnel in later independent operations.

If an assessee occasionally makes a response which has not been anticipated, the controller/assessor notes the unusual response in a "remarks" section of the score sheet for later evaluation.

Global Ratings

In addition to the behavioral observations described above, it was considered desirable for controller/assessors to also rate assessees on each dimension after conclusion of the simulations. These "global" ratings provide an overall evaluation of an assessee's standing on each of the 11 dimensions supposed to be measured by the simulations and may be pooled with the behavioral scores or used as separate measures.

For these ratings, a scale was devised for each dimension. One end of the scale was anchored by a description of characteristics indicating effective performance on the dimension, the other end by a description of characteristics indicating ineffective performance. The rating task requires controller/assessors to judge, on a five-point scale, how closely the assessee's performance approaches one or the other end of the scale. The global rating form appears in Appendix B. The same form is used for all simulations.

Ratings are performed by each controller/assessor who has had contact with an assessee during a simulation. Accordingly, two sets of ratings are obtained for each assessee.

Potential Scores

Through use of the scoring system as described, it will be possible to derive several types of dimension scores. Following are the most promising types:

- (1) Arithmetical sum of item scores for each dimension. Since the total number of items for each dimension differs, ranges of possible scores will not be equivalent under this procedure.

- (2) Percentage based on the relation of obtained score to total possible score for each dimension. Transformation to percentages will make dimension scores fully comparable.
- (3) Global Rating score for each dimension, based on means of assessor/controller ratings.

If desired, it is also possible to obtain summative and percentage scores for each general indicator.

DEVELOPMENT OF TRAINING MATERIALS

From previous HumRRO experience, it was clear that organizational simulations are highly complex vehicles that are strongly dependent for success upon the competence of personnel who serve in the roles of controllers. Despite the numerous checks and controls that may be designed into the simulation procedures, the ultimate determinant of realism and credible flow of activities is the caliber of the controller staff.

In simulations that are conducted for assessment purposes, the need for a competent administrative staff is increased by several additional requirements:

First, effective assessment depends upon minimal variability in the conditions to which assessees are exposed. This need for uniform conditions requires that controller inputs be the same for all assessees and that there be little deviation from the simulation protocols. Furthermore, controllers must be thoroughly cognizant of the rationales for all inputs, so that unanticipated player responses can be handled and incorporated into the ongoing scenario without serious damage to the requirement for uniform conditions.

Second, precise timing and execution of inputs is necessary, in order to create situations with demand characteristics of sufficient strength to stimulate behavior that is scorable according to the assessment plan.

Finally, thorough familiarity with the rationales of the problems is essential for making valid evaluations of the behavior elicited by them.

It was therefore deemed essential that controller/assessor personnel thoroughly understand (a) the rationales of simulations, assessment as it applies to simulation, and the particular assessment simulations developed in this project, and (b) both the simulation content and scoring materials that were developed. The training program was designed to meet these requirements.

Since it is necessary for controller/assessors to both understand the rationales and use the procedures effectively, heavy emphasis was placed upon intensive analysis of simulation and assessment materials and on practice in their use. The program was designed to permit early student contact and experience with the materials and, also, to provide frequent feedback and critique of performance.

Because of personnel turnover, there will probably be periodic requirements for training of controller/assessors by the USAIS Assessment Center. Furthermore, the possibility exists that other centers may be established in the future, with consequent requirements for trained personnel. Since it appeared that there would be a need for future training to be conducted by individuals other than the HumRRO personnel who designed the simulations, the training program was made sufficiently detailed to cover this eventuality. Training materials consist of a Student Manual and an Instructor's Guide, which contain complete guidance for conducting the training. With these two documents and the simulation and assessment materials, fully satisfactory training can be conducted. A separate set of training materials was developed for each of the three simulations.

SEQUENCE OF DEVELOPMENT

Each simulation module was developed independently as a separate product containing all materials necessary to (a) train the administrative staff, (b) conduct the simulations, and (c) perform the required assessments. For each simulation, the sequence of development was as follows:

- (1) Design and development of the simulation, assessment procedures, and training program by HumRRO.
- (2) Informal review and comment by the Assessment Center.
- (3) Incorporation of suggested modifications by HumRRO.
- (4) Training of controller/assessors.
- (5) Pilot test with six subjects.
- (6) Modification by HumRRO as result of pilot test.
- (7) Submission of draft materials to ARI.
- (8) Review and comment by ARI.
- (9) Incorporation of suggested modifications by HumRRO.
- (10) Submission of final product to ARI and initial supply of materials to Assessment Center.

The schedule of work on the simulations was synchronized with the operational schedule of the Center. Therefore, order of completion of the simulation modules was (a) Senior Noncommissioned Officer (NCOES), (b) Junior Company-Grade Officer (OCS-IOBC), and (c) Senior Company-Grade Officer (IOAC).

Chapter 3

RESULTS

LEADERSHIP DIMENSIONS

The joint working group specified 14 leadership dimensions (Figure 1) as relevant for assessment by the Center. Eleven of these dimensions (indicated by asterisk in the Figure) were judged to be susceptible of assessment by simulation. The general indicators associated with each of these dimensions are shown in Appendix C.

Leadership Dimensions

1. Social Skills (Interpersonal Competence)*
2. Communication Skills*
3. Adaptability*
4. Motivation*
5. Forcefulness*
6. Mental Ability
7. Decision Making*
8. Administrative Skills*
9. Organizational Identification*
10. Effectiveness in Organizational Leadership Role*
11. Supervisory Skills*
12. Physical Competence
13. Technical and Tactical Competence*
14. Problem-Solving Ability

NOTE: Asterisks indicate dimensions judged appropriate for assessment by simulation.

Figure 1

Three dimensions were found not to be appropriate for assessment by simulation. It was determined that Mental Ability and Problem-Solving Ability could not be measured with sufficient precision within the context of the planned simulations and that Physical Competence was not relevant to them. These dimensions were evaluated in other parts of the assessment programs.

The 11 dimensions selected for assessment by simulation were considered applicable in varying degrees for all levels of personnel. However, it was recognized that the patterns of the dimensions in terms of the relative frequencies with which each was measured would probably differ for the three groups of assessees. As one example, the OCS-IOBC group was not expected to possess much technical knowledge and the simulation for this group was designed so that a minimum of such knowledge would be required. It was anticipated that problems for the OCS-IOBC simulation would place more emphasis upon so-called "soft" leadership skills. The pattern of scored dimensions would reflect this emphasis. Accordingly, it was recognized that dimension scores would be differentially distributed in the three simulations.

ASSESSMENT SIMULATIONS

Although different in content, the three simulations are similar in format and administrative procedures. Each is preceded by an oral briefing of assesseees on the day prior to participation. Administrative instructions and information relative to the simulated organizations are presented and staff members conduct a tour of the simulation area and a demonstration of the communication system. Each assessee is issued a packet of "background materials" which includes operations maps, personnel rosters, communications data, situation analyses, and a diary of events supposed to have occurred prior to the start of the simulation. Assesseees are instructed to familiarize themselves with the materials sufficiently to be able to use the information while leading their units during the following day's activities.

Each simulation is conducted in "real time" and the composition and responsibilities of controller/assessor teams are essentially the same for all. However, the contents and structures differ according to the level of the personnel who are assessed. These attributes of the simulations are discussed below.

Senior Noncommissioned Officer Simulation

Description. The Senior Noncommissioned Officer Assessment Simulation (NCOES) occurs within the organizational context of an Infantry rifle platoon. The simulated unit is one of the platoons of an Infantry rifle company that is part of a maneuver battalion of an Infantry brigade engaged in stability operations in Southeast Asia. The platoon has been detached from its parent company, reinforced, and assigned a semi-independent security mission which it is to execute under the operational control of its parent battalion. During the course of the simulation, the platoon is assigned a new mission which it subsequently executes, also under the operational control of its parent battalion. An outline of the scenario appears in Appendix D.

Each assessee fills the role of Platoon Sergeant during the execution of both missions. According to the scenario, the Platoon Leader has been wounded and evacuated prior to start of the simulation. The Platoon Sergeant has assumed command of the platoon and serves as acting commander throughout the simulated operation.

In the three-man controller/assessor team, the senior individual serves as Battalion Controller/assessor. He performs the roles of battalion commander, battalion executive officer, and battalion S1, S2, S3, and S4 for two assesseees, and he assesses both individuals. In addition, he functions as Chief Controller for the team. As such, he maintains the pace of the simulation, provides Platoon Controller/assessors any needed assistance, and resolves any questions or unanticipated situations that may arise during conduct of the simulation.

Each Platoon Controller/assessor controls and assesses one individual. For that assessee, he performs the roles of squad leaders of the 1st, 2nd, 3rd, and 4th Squads; squad leader of the attached mortar squad; the artillery forward observer; and support personnel, when any of these personnel have occasion to communicate with the assessee.

Although players experience the simulation as continuous, it was designed in three phases which differ in the amount of environmental pressure that is imposed. Design of the simulation in this way permits observation of assesseees' performance under gradually increasing pressure and makes it possible to compare scores between phases if desired. As designed, progression of pressure was achieved principally by varying frequencies and rate of inputs. Since the simulation was designed in three phases of equal duration (2 hours), an increase in number of inputs within a phase required a higher rate of response and, accordingly, resulted in an experienced of increased pressure by assesseees. In addition to frequency and rate of inputs, other input characteristics that

were varied were complexity of probes (number of probe elements) and criticality of probes to mission accomplishment and unit survival.

The phases were designed as follows:

Phase I (Low Pressure)—requires performance during relatively routine operations in a slowly changing stability operation.

Phase II (Moderate Pressure)—requires performance during a time period involving an abrupt change of mission, with preparation for and conduct of movement to a new area of operations.

Phase III (High Pressure)—requires performance under near-overload conditions created by frequency, complexity, and criticality of probes characteristic of combat activities in a rapidly changing stability operation.

Structure of Inputs. The Senior Noncommissioned Officer Simulation is comprised of 40 probes consisting of 108 probe elements. Numbers of probe elements range from 1 to 11 per probe and mean number of probe elements is 2.70. Table 1 shows the structure of inputs in the final version of the simulation. It depicts the pattern of inputs throughout the simulation and shows the differential frequency of inputs between phases. The "All Inputs" section of Table 1 provides indices of both controller/assessor workload and input load experienced by assesses. Work loads are shown in the columns for the respective controller/assessors. It should be noted that Battalion Controller/assessors are responsible for two assessees and, accordingly, actual workloads for these personnel are double that indicated in Table 1.

The "All Inputs - Total" column provides indices of input load. During the course of the entire simulation, each assessee experiences 108 input messages. Numbers of inputs increase progressively through the phases of the simulation.

Table 1

**Frequencies of Inputs,
Senior Noncommissioned Officer Simulation^a**

Phase	Scheduled Inputs			Contingent Inputs			All Inputs		
	Bn C/A	Plt C/A	Total	Bn C/A	Plt C/A	Total	Bn C/A	Plt C/A	Total
I	7	9	16	6	6	12	13	15	28
II	3	18	21	7	3	10	10	21	31
III	7	27	34	7	8	15	14	35	49
Total	17	54	71	20	17	37	37	71	108

^aFrequencies for controller/assessors (C/A) are in terms of one assessee. Each Battalion Controller/assessor is responsible for controlling and evaluating two assessees simultaneously.

Table 2 compares frequencies of inputs and critical inputs (scored inputs) and shows the percentages of inputs scored for the final version of the simulation. The controller/assessor columns in the "Critical Inputs" section of the table indicate the assessment workload for the respective positions and the "Total" column of that section provides indices of scoring opportunities for each assessee.

During the simulation, the performance of each assessee is evaluated on 61 inputs, or 56% of the total inputs. Of course, more than one score is obtained for many of the critical inputs.

Table 2
**Scoring Opportunities and Assessment Workload,
 Senior Noncommissioned Officer Simulation^a**

Phase	Inputs			Critical Inputs ^b			Percent of Inputs Scored
	Bn C/A	Plt C/A	Total	Bn C/A	Plt C/A	Total	
I	13	15	28	7	10	17	61
II	10	21	31	8	10	18	58
III	14	35	49	7	19	26	53
Total	37	71	108	22	39	61	56

^aFrequencies are in terms of one assessee.

^bInputs upon which one or more scores are obtained.

After the simulation was designed and developed by HumRRO, it was reviewed by the Assessment Center. Requested modifications resulting from the review were incorporated by HumRRO. The requested modifications mainly took the form of (a) revision in duration of the phases, with a resulting compression of inputs into shorter time spans; and (b) deletion of some scores (see following section), with concomitant reduction in number of critical inputs from 74 scoring opportunities to 61.

Table 3 compares the designed and revised versions of the simulation in terms of duration and input rates. The principal effects of revision were a compression of total simulation time to five hours (300 minutes) and a concomitant increase in input rate. After revision, phases were unequal in duration. In the final version, input messages are injected at an overall rate of .36 per minute. The rate ranges from .25 in the Low-Pressure phase to .54 per minute in the High-Pressure phase. The overall rate translates to one input every 2.8 minutes.

In this connection, input rate reflects environmental pressure (input load) and cannot be construed to indicate the activity level of assessee. Input messages merely serve to pose a problem to an assessee. His perception of the problem and his resulting responses usually lead to a series of messages up and down the chain of command. Furthermore, spontaneous activity by assessee is free to vary. Accordingly, activity levels are characteristically much higher than input rates.

Table 3
**Phase Duration and Input Rate,
 Senior Noncommissioned Officer Simulation**

Phase	Duration (Minutes)		Input Rate (Inputs/Minute)	
	Designed	Revised	Designed	Revised
I	120	111	.23	.25
II	120	98	.26	.32
III	120	91	.41	.54
Total	360	300	.30	.36

Structure of Scores. The modification required by the Assessment Center included deletion of some scoring items and revision of others to shift scoring from one leadership dimension to another. Net deletions amounted to 28 items. Table 4 compares the designed and revised structures of scores according to leadership dimensions.

In the final version, 111 scores are obtained on 10 dimensions. This amounts to 1.82 items per critical input. Across dimensions, numbers of scores range from 1 for Social Skills to 30 for Supervisory Skills. Mean scores per scored dimension is 11.1. The wide variability between dimensions is due, in part, to the differential appropriateness of combat-oriented problems for the various dimensions.

Scores are also obtained in the form of a "global rating" for each of the leadership dimensions. Each controller rates assessees with whom he has had contact on the basis of overall effectiveness during the simulation. The product is 2 evaluations per assessee on 11 dimensions.

Table 4
Structure of Scores,
Senior Noncommissioned Officer Simulation

Dimension	Number of Scores	
	Designed	Revised
Social Skills	4	1
Communication Skills	6	5
Adaptability	13	2
Motivation	6	2
Forcefulness	16	7
Decision Making	20	16
Administrative Skills	12	19
Organizational Identification	3	0
Effectiveness in Organizational Leadership Role	12	10
Supervisory Skills	33	30
Technical and Tactical Competence	13	19
Total	138	111

Junior Company-Grade Officer Simulation

Description. The Junior Company-Grade Officer Simulation (OCS-IOBC) occurs within the organizational context of an Infantry rifle platoon. The simulated unit is one of the platoons of an Infantry rifle company originally assigned to conduct Adventure Training in a mountainous area near the city of Asheboro, North Carolina. Prior to start of the simulation, the company commander has been requested by local authorities to assist in a search for two lost boys. The simulated platoon has been assigned an area of operations within which the search is conducted under the control of the company commander. Upon completion of this mission, the platoon receives a new mission. It is to move to the city of Asheboro where, with the remainder of the company, it is to provide assistance in the aftermath of a tornado that has devastated much of the city. During the course of the simulation, the platoon executes this new mission. An outline of the scenario appears in Appendix E.

Each assessee fills the role of Platoon Leader during the execution of both missions. In this role, he communicates by radio with his company commander, various civilian agencies, and subordinates within the platoon. In general, he directs the activities of his platoon and coordinates with other platoons and civilian agencies.

In the three-man controller/assessor team, the senior individual serves as Company Controller/assessor and Chief Controller. He performs the roles of company commander and representatives of civilian agencies. Each Platoon Controller/assessor controls and assesses one individual for whom he performs the roles of platoon sergeant and leaders of the 1st, 2nd, and 3rd Squads. According to the scenario, the 4th Squad has remained at the unit's permanent base for training and, therefore, no roles are performed for its personnel.

The simulation was designed in two phases of unequal length, which differ in the amount of environmental pressure that is imposed. The phases were designed as follows:

Phase I (Low Pressure)—requires performance during relatively slow-moving events related to a search for lost boys and movement to city of Asheboro.

Phase II (High Pressure)—requires performance under pressure which steadily increases to near-overload, created by frequency and complexity of probes characteristic of rapidly changing conditions in a civil-disaster operation.

Structure of Inputs. The Junior Company-Grade Officer Simulation is comprised of 55 probes consisting of 179 probe elements. Number of probe elements per probe ranges from 1 to 29, with a mean of 3.25. Table 5 shows the structure of inputs in the final version of the simulation. The "All Inputs" section of the table provides indices of controller/assessor workloads and the input load experienced by assessees. Company Controller/assessors are responsible for two assessees and, accordingly, actual workloads for these personnel are double that indicated in Table 5.

Table 5
Frequencies of Inputs,
Junior Company-Grade Officer Simulation^a

Phase	Scheduled Inputs			Contingent Inputs			All Inputs		
	Co. C/A	Plt C/A	Total	Co. C/A	Plt C/A	Total	Co. C/A	Plt C/A	Total
I	6	21	27	11	12	23	17	33	50
II	25	47	72	30	27	57	55	74	129
Total	31	68	99	41	39	80	72	107	179

^aFrequencies for controller/assessors (C/A) are in terms of one assessee. Each Company Controller/assessor is responsible for controlling and evaluating two assessees simultaneously.

During the course of the simulation, each assessee experiences 179 input messages. Seventy-nine more inputs are injected in Phase II than in Phase I; however, this difference is not attributable solely to increased rate. Phase II is 68 minutes longer than Phase I and this difference in duration partly accounts for the larger number of inputs in the second phase.

Total inputs is greater for OCS-IOBC than for the NCO simulation (Table 1) despite a somewhat shorter duration. This greater load was designed into the simulation

intentionally. The principal role of this simulation is assessment for selection purposes. Since ability to perform effectively under intense pressure is an attribute of a successful officer and since pressure due to technical problem difficulty could not be as great because potential assessee lack technical knowledge, it was necessary to generate pressure through higher input rates. In this way, the ability of potential officers to function effectively under pressure can be assessed without resort to difficult technical problems.

Table 6 compares frequencies for inputs and critical inputs and shows percentages of inputs scored for the final version of the simulation. The controller/assessor columns in the "Critical Input" section indicate the assessment workload of the two positions, and the "Total" column of that section provides indices of scoring opportunities. The performance of each assessee is evaluated on 88 inputs, or 49% of the total inputs. However, more than one score is obtained for many critical inputs.

Table 6

**Scoring Opportunities and Assessment Workload,
Junior Company-Grade Officer Simulation^a**

Phase	Inputs			Critical Inputs ^b			Percent of Inputs Scored
	Co. C/A	Plt C/A	Total	Co. C/A	Plt C/A	Total	
I	17	33	50	11	17	28	56
II	55	74	129	25	35	60	47
Total	72	107	179	36	52	88	49

^aFrequencies are in terms of one assessee.

^bInputs upon which one or more scores are obtained.

Table 7 compares the designed and revised versions of the simulation according to duration and input rate. Revision mainly consisted of lengthening Phase II by 10 minutes, in order to spread the input times of several probes that the pilot test showed to be too closely scheduled near the end of the simulation.

In the final version, input messages are injected at an overall rate of .63, or one input every 1.5 minutes. The rates were .55 for Phase I and .68 for Phase II. These rates confirm the greater input load for OCS-IOBC assessee as contrasted with the NCO and IOAC simulations.

Table 7

**Phase Duration and Input Rate,
Junior Company-Grade Officer Simulation**

Phase	Duration (Minutes)		Input Rate (Inputs/Minute)	
	Designed	Revised	Designed	Revised
I	91	91	.55	.55
II	179	189	.71	.68
Total	270	280	.66	.63

Structure of Scores. Table 8 compares the designed and revised structures of scores according to leadership dimensions. The revision resulted in deletion of four scoring items. In the final version, 117 scores are obtained on 9 dimensions. This amounts to 1.33 items per critical input. Across dimensions, numbers of scores range from 1 for Communication Skills to 31 for Decision Making. Mean scores per scored dimension is 13. Again, the wide variability between dimensions is due, in part, to differences in appropriateness of relevant problems for the various dimensions.

Table 8 shows that, in this simulation, greatest emphasis is upon Decision Making and Supervisory Skills. In contrast to the simulation for noncommissioned officers, somewhat greater emphasis is placed upon Motivation, Forcefulness, and Effectiveness in Organizational Leadership Role, with almost negligible scoring of Technical Competence.

Global ratings are also obtained in the form of 2 evaluations per assessee on the 11 leadership dimensions.

Table 8

**Structure of Scores,
Junior Company-Grade Officer Simulation**

Dimension	Number of Scores	
	Designed	Revised
Social Skills	4	4
Communication Skills	1	1
Adaptability	0	0
Motivation	11	11
Forcefulness	12	12
Decision Making	32	31
Administrative Skills	14	13
Organizational Identification	0	0
Effectiveness in Organizational Leadership Role	17	18
Supervisory Skills	27	24
Technical Competence	3	3
Total	121	117

Senior Company-Grade Officer Simulation

Description. The Senior Company-Grade Officer Assessment Simulation (IOAC) occurs within the organizational context of an Infantry rifle company. The simulated unit is one of the companies of a maneuver battalion of an Infantry brigade engaged in stability operations in Southeast Asia. The company has been assigned and is executing a stability operation mission within a larger such mission of its parent battalion. During the course of the simulation, the company is assigned a new mission which it subsequently executes, again within a larger mission newly assigned to its parent battalion. Each assessee fills the role of company commander during the execution of both missions. An outline of the scenario appears in Appendix F.

In the three-man controller/assessor team, the senior individual serves as Chief Controller and Battalion Controller/assessor. He performs the roles of battalion

commander, battalion executive officer, and battalion S1, S2, S3, and S4 for two assesseees and evaluates both individuals. Each Company Controller/assessor controls and assesses one individual, for whom he performs the roles of leaders of the 1st, 2nd, 3rd, and 4th Platoons; the heavy mortar forward observer; the artillery forward observer; and other support personnel, when these personnel have occasion to communicate with the assessee.

The simulation was designed in three phases of equal duration (2 hours), with increasing environmental pressure within each phase. The phases were designed as follows:

Phase I (Low Pressure) - requires performance during relatively routine operations in a slowly changing stability operation.

Phase II (Moderate Pressure) - requires performance during a time period involving an abrupt change of mission, with preparation for, and conduct of, movement to a new operational area.

Phase III (High Pressure) - requires performance under near-overload conditions created by frequency, complexity, and criticality of probes characteristic of combat activities in a rapidly changing stability operation.

Structure of Inputs. The Senior Company-Grade Officer Simulation is comprised of 49 probes consisting of 166 probe elements. Numbers of probe elements range from 1 to 30 per probe and mean number of probe elements is 3.38. Table 9 shows the structure of inputs in the final version of the simulation. The "All Inputs" section provides indices of controller/assessor workloads and the input load experienced by assesseees. Again, Battalion Controller/assessors are responsible for two assesseees and actual workloads for these positions are double that shown in Table 9.

Table 9

**Frequencies of Inputs,
Senior Company-Grade Officer Simulation^a**

Phase	Scheduled Inputs			Contingent Inputs			All Inputs		
	Bn C/A	Co. C/A	Total	Bn C/A	Co. C/A	Total	Bn C/A	Co. C/A	Total
I	10	12	22	7	12	19	17	24	41
II	7	23	30	3	5	8	10	28	38
III	12	44	56	17	14	31	29	58	87
Total	29	79	108	27	31	58	56	110	166

^aFrequencies for controller/assessors (C/A) are in terms of one assessee. Each Battalion Controller/assessor is responsible for controlling and evaluating two assesseees simultaneously.

The "All Inputs - Total" column provides indices of input load. During the course of the simulation, each assessee experiences 166 input messages. Phase II is shown to have slightly fewer inputs than Phase I. As originally designed, Phase II had the greater number of inputs; however, deletions recommended during the review process resulted in a reversal of this ratio. (This reversal is more clearly seen in connection with input rates, in Table 11).

Table 10 compares frequencies for inputs and critical inputs (scored inputs) and shows percentages of inputs scored for the final version of the simulation. The controller/assessor columns of the "Critical Inputs" section indicate the assessment workload of the two positions, and the "Total" column of that section provides indices

Table 10

**Scoring Opportunities and Assessment Workload,
Senior Company-Grade Officer Simulation^a**

Phase	Inputs			Critical Inputs ^b			Percent of Inputs Scored
	Bn C/A	Co. C/A	Total	Bn C/A	Co. C/A	Total	
I	17	24	41	11	19	30	73
II	10	28	38	5	11	16	42
III	29	58	87	17	26	43	49
Total	56	110	166	33	56	89	54

^aFrequencies are in terms of one assessee.

^bInputs upon which one or more scores are obtained.

of scoring opportunities. During the simulation, the performance of each assessee is evaluated on 89 critical inputs, or 54% of total inputs. This percentage is closely comparable to that for the NCO simulation and slightly larger than the OCS-IOBC module.

Modifications resulting from the review process took the form of (a) reduction in duration of the simulation, with concomitant shortening of two phases and a resulting compression of inputs into shorter time spans; (b) deletion of some inputs; and (c) deletion of some scores (see following section), with concomitant reduction in number of critical inputs from 101 scoring opportunities to 89.

Table 11 compares the designed and revised versions of the simulation in terms of duration and input rates. The principal effects of revision were a compression of total simulation time to five hours (300 minutes) and an increase in input rate, mainly in Phase I. After revision, phases were unequal in duration. In the final version, input messages are injected at an overall rate of .55 per minute. The rate ranges from .41 in the Moderate-Pressure phase to .72 in the High-Pressure phase. Rate for the "Low-Pressure" phase is .47.

The overall rate translates to one input every 1.8 minutes. Again, input rate reflects environmental pressure and cannot be construed to reflect activity levels of assesseees.

Table 11

**Phase Duration and Input Rate,
Senior Company-Grade Officer Simulation**

Phase	Duration (Minutes)		Input Rate (Inputs/Minute)	
	Designed	Revised	Designed	Revised
I	120	87	.35	.47
II	120	93	.37	.41
III	120	120	.72	.72
Total	360	300	.48	.55

Structure of Scores. Table 12 shows the designed and revised structures of scores according to leadership dimensions. Net deletions amounted to 21 items.

In the final version, 124 scores are obtained on 9 dimensions. This amounts to 1.39 items per critical input. Across dimensions, numbers of scores range from 2 for Motivation to 40 for Supervisory Skills. Mean scores per scored dimension is 13.77.

In this simulation, greatest emphasis is upon Supervisory Skills, with somewhat less emphasis upon Effectiveness in Organizational Leadership Role, and Technical and Tactical Competence; Decision Making, Administrative Skills, and Adaptability are also well represented. Throughout development of all three simulations, Organizational Identification proved to be exceedingly difficult to assess. Accordingly, as with the other simulations, no scoring opportunities could be developed for that dimension.

Global ratings are also obtained in the form of 2 evaluations per assessee on 11 leadership dimensions.

Table 12
Structure of Scores,
Senior Company-Grade Officer Simulation

Dimension	Number of Scores	
	Designed	Revised
Social Skills	3	0
Communication Skills	11	8
Adaptability	9	10
Motivation	3	2
Forcefulness	9	8
Decision Making	18	14
Administrative Skills	14	11
Organizational Identification	0	0
Effectiveness in Organizational Leadership Role	17	16
Supervisory Skills	42	40
Technical and Tactical Competence	19	15
Total	145	124

TRAINING FOR ASSESSMENT STAFF

Competence of the administrative staff is the most critical determinant of success in the use of simulations for assessment purposes. Accordingly, it was judged to be essential to produce a training program that would insure development of highly proficient teams of controller/assessors. Furthermore, it was considered desirable that the training program be suitable for future administration without the assistance of HumRRO personnel who designed the simulations. For these reasons, the program was designed to provide intensive exposure to the rationales, contents, and procedures of the simulations. The training materials were developed in such detail that training can be conducted without additional guidance, if desired.

Separate training materials were developed for each simulation. However, schedules and formats of the programs and materials are identical, with the exception that NCOES

and IOAC simulations are five-day programs, while training for the OCS-IOBC simulation is scheduled for four days. The difference is due to the fact that the OCS-IOBC simulation consists of only two phases, while the others are comprised of three phases. Since certain parts of the training consist of reviews of phase materials, training for a two-phase simulation can be completed in a shorter period than that for three phases.

In the three programs, content is identical when not specific to a particular simulation. On the other hand, the programs and materials differ where content is simulation-specific. The following discussion is applicable to all three simulations.

The Training Programs

Each training program was designed so that it can be administered by one instructor. If two instructors are available, however, the training will be materially improved, because two instructors can more effectively monitor and critique trainee practice sessions.

Each program of training is heavily oriented toward practical exercises and "hands-on" work. In early periods, simulation materials and procedures are reviewed through the use of lecture-discussion and conference techniques. These early periods are designed to provide background for later sessions that consist of extensive conference-review of simulation and assessment materials and of practical exercises intended to give student controller/assessors operational experience in conducting the simulations. Throughout, trainees are required to study both training and simulation materials prior to each day's session.

The preferred daily schedule for training to conduct three-phase simulations follows:

Day 1 — Overview

- | | |
|-----------|--|
| 0800-0830 | Introduction to Course <ol style="list-style-type: none"> a. Purpose b. Instructions to students c. Student preparation d. Schedule |
| 0830-0900 | Introduction to Assessment Simulation <ol style="list-style-type: none"> a. Rationale b. Requirements |
| 0900-1000 | The Simulation (simulation-specific) <ol style="list-style-type: none"> a. The simulated organization b. Participant organizational roles c. Communication system and procedures d. Design of the simulation e. Assessee schedule |
| 1000-1200 | Controlling <ol style="list-style-type: none"> a. Role of controllers b. Functions of controllers c. Review of controller materials |
| 1300-1500 | Assessing <ol style="list-style-type: none"> a. Concept of assessing b. Role of assessor c. Functions of assessor d. Review of assessor materials |
| 1500-1630 | The Tactical Situation <ol style="list-style-type: none"> a. Review of background materials b. Review of total tactical operation |
| 1630-1700 | Conclusion <ol style="list-style-type: none"> a. Summary b. Schedule for Day 2 c. Student assignment |

Day 2 — Review of Simulation Phase I

0800-0930	Background and Phase I Tactical Situation
0930-1600	Review of Phase I Detailed “walk-through” and analysis of simulation and assessment items for phase.
1600-1700	Critique and student assignment

Day 3 — Review of Simulation Phase II

0800-0930	Phase II Tactical Situation
0930-1600	Review of Phase II Detailed “walk-through” and analysis of simulation and assessment items for phase.
1600-1700	Critique and student assignment

Day 4 — Review of Simulation Phase III

0800-0930	Phase III Tactical Situation
0930-1600	Review of Phase III Detailed “walk-through” and analysis of simulation and assessment items for phase.
1600-1700	Critique and student assignment

Day 5 — Rehearsal of the Simulation

0800-0900	Introduction to rehearsal
0900-1500	Rehearsal
1500-1700	Critique

Since the OCS-IOBC simulation consists of only two phases, Day 4 is the final day of training and is spent in rehearsal.

The schedule shown assumes the availability of personnel other than trainees who can serve as assessees during the rehearsal period. The schedule provides for an option (not shown) in the event such personnel are not available. Under these circumstances, trainees would rotate through assessee roles during the various phases; however, two rehearsal days are required to provide opportunity for all trainees to perform as controller/assessors in all phases. Accordingly, under this option, an additional day is added to the schedule, for a total of six days of training.

Upon completion of the training as designed, members of the controller/assessor staff will be thoroughly familiar with both the simulation and the assessment procedures pertinent to it.

The Training Materials

Materials required for conducting the training are (a) simulation and assessment materials, (b) *Instructor's Guide for Controller/Assessor Training*, and (c) *Controller/Assessor Training Manual*. All of these documents are specific to the particular simulation for which training is conducted. Thus, three sets of materials were developed.

Instructor's Guide. An *Instructor's Guide for Controller/Assessor Training* was developed for each simulation. The document is designed for use by instructors and provides all guidance required by an instructor to develop and conduct the training program. It contains discussions of assessment and simulation methodology, the specific simulation, and instructions for conducting training; an outline of the training schedule, by period of instruction, to include scopes, training notes, and references for each period; all support requirements; and appendices containing examples of required supplementary materials.

Training Manual. The *Controller/Assessor Training Manual* is designed to serve as a student text. It contains discussions of the simulation and of the roles and responsibilities of controller/assessors, descriptions and detailed instructions for use of the simulation and assessment materials, and guidance for study and practice with the materials. At the beginning of training, students are issued (a) a training manual, (b) probe manuals for their assigned controller position, and (c) assessment materials appropriate to their assigned positions.

Training Assessment Center Staff

As designed, the training programs require four (OCS-IOBC) or five days (NCOES and IOAC) to fully conduct. However, it was the judgment of responsible Assessment Center personnel that controller/assessors were sufficiently capable and familiar with the simulations that full training would not be required. Accordingly, abbreviated training was conducted for these personnel. For each simulation, there was conducted one day of training, which consisted of an overview of the simulation and rehearsal.

PILOT TESTS

After completion of training for each simulation, a pilot test of the full assessment process was conducted. Six naive subjects from populations appropriate for each assessment level served as assessees. The pilot tests provided opportunity to observe the functioning of the simulations under full operational conditions and to determine whether any final modifications were needed. Upon completion, subjects were interviewed to identify any difficulties encountered during their performance.

A few minor modifications were found to be required. In several instances it was necessary to reword input messages, and in one simulation (OCS-IOBC) the timing of one series of messages was rearranged to enable controllers to better manage the communications traffic. According to assessee reports, face validity appeared to be high and most subjects reported that the simulations were both interesting and challenging.

Scoring procedures were found to be adequate and assessors reported no difficulty in identifying the behaviors designated in the assessment materials. Since no two assessors conduct exactly the same assessments during the simulations, inter-rater reliability data were not available from the pilot tests. However, scores revealed wide differences in performance between assessees, and members of controller teams reported strong consensus as to the effectiveness of various assessees.

After incorporation of modifications resulting from evaluations of the pilot tests, each simulation was accepted for delivery by the ARI COTR Representative at Fort Benning.

THE ASSESSMENT SIMULATION MODULES

For each simulation, the finished module consists of a set of documents which, taken together, provides a full description and all materials necessary to (a) train appropriate personnel, (b) conduct the simulation, and (c) conduct assessments relative to the simulation. Each module consists of the following documents:

I. Purpose, Concept, and Description of the Simulation

This document presents an overview of the simulation and shows the relationships between the various materials. The purpose and concept of the simulation are discussed, administrative procedures and support requirements are described, and an outline of the scenario is presented.

II. Training Materials

- A. Instructor's Guide for Controller/Assessor Training
- B. Controller/Assessor Training Manual
- C. Inputs by Sequence

This document combines all controllers' inputs into one volume by sequence and is used by instructors as a ready reference during certain phases of controller/assessor training.

III. Simulation Materials

- A. Background Materials (without maps)
- B. Scheduled Inputs - Superior Controller (Battalion - IOAC and NCOES; Company - OCS-IOBC)
- C. Contingent Inputs - Superior Controller (Battalion - IOAC and NCOES; Company - OCS-IOBC)
- D. Scheduled Inputs - Subordinate Controller (Company - IOAC; Platoon - NCOES and OCS-IOBC)
- E. Contingent Inputs - Subordinate Controller (Company - IOAC; Platoon - NCOES and OCS-IOBC)
- F. Inputs by Probe (Master list)
- G. Controller Checklist
- H. OPORD 27 (IOAC only)
- I. Printed Input Materials Phase II (OCS-IOBC only)
- J. Fragmentary Order (NCOES only)

IV. Assessment Materials

- A. Assessor Report - Battalion (IOAC and NCOES) or Company (OCS-IOBC) Assessor
- B. Assessor Report - Company (IOAC) or Platoon (NCOES and OCS-IOBC) Assessor
- C. Global Ratings of Leadership Dimensions
- D. Assessor Reports Item Key

A reference document used by trainers, administrative personnel, and computer personnel. It is a master list of all items appearing in the assessor reports, with scoring weights and dimensions indicated for each item.

Twenty five final copies of each module were delivered to the ARI COTR Representative at Fort Benning, Georgia. In addition, HumRRO delivered to the Assessment Center at Fort Benning a supply of all materials sufficient to train future controller/assessors and to process 50 assessees in each of the three simulations.

Chapter 4

DISCUSSION

The work described in this report completes all requirements for the HumRRO project entitled "Design and Development of Leadership Scenarios." The overall objective—to develop procedures and materials to be used in conducting leadership assessment simulations for three levels of military personnel—was accomplished. The simulations that were developed provide effective means for assessing the performance capabilities of personnel at the respective levels.

As "organizational" simulations, the assessment vehicles developed for this project provide unique contributions to the assessment program for each level of personnel. The ability to function effectively within the constraints imposed by organizational factors is important for military personnel, but most assessment techniques do not take such factors into account in any realistic fashion. Organizational simulations possess the capability for effectively creating the environments characteristic of complex hierarchical organizations and, accordingly, provide a contribution to the assessment process that cannot be obtained through any other technique.

Although the three simulations were designed specifically to meet the operational requirements of the USAIS Assessment Center at Fort Benning, there appears to be no reason why they would not be equally appropriate for use at other locations. However, care should be taken in specifying personnel who would be assessed by the simulations. For example, the Senior Company-Grade Officer and the Senior Noncommissioned Officer simulations are concerned with Infantry combat operations and would not be a fair test of individuals who lack at least a minimal working knowledge of Infantry techniques and activities at the organizational levels depicted in the two scenarios. On the other hand, the Junior Company-Grade Officer simulation has no such requirement for knowledge about Infantry techniques and practices. Although this simulation occurs within the context of an Infantry platoon, the organization could be portrayed as a platoon of any branch of the service without much loss of credibility or of assessment validity. Therefore, the Junior Company-Grade Officer simulation is appropriate for a wider range of personnel than those simulations designed for senior company-grade officers and senior noncommissioned officers. Because of its appropriateness to a wide range of personnel, the Junior Company-Grade Officer simulation has been selected for experimental use with sophomore-year ROTC students. All three simulations are specific to U.S. Army organizations and individuals who are unfamiliar with the general structure of Army organizations would be handicapped in their ability to perform effectively.

The simulations have the potential for producing a variety of assessment data. Numerical scores based upon either the global ratings or behavioral observations, or both, will contribute significantly to the prediction of school success and on-the-job performance. In addition, the scores possess excellent potential for contribution to dimension profiles, which can be especially valuable for counseling purposes.

One alternative which has this potential for moving beyond simple numerical prediction would involve evaluation of the effects of pressure upon the performance of assessees. As previously described, each simulation was designed in phase that differ in frequency, complexity, and criticality of inputs, for the purpose of creating different degrees of environmental pressure. This procedure makes it possible to establish a baseline

of performance for each assessee in the initial "low-pressure" phase of a simulation and to compare this performance with that occurring in later phases of greater intensity. Either deteriorations or gains in quality of performance under pressure would have special significance for both prediction and counseling.

With reference to counseling, Assessor Report forms are the most useful sources of information about performance in the simulations. On the forms, scoring items are structured so that the specific actions taken in response to any critical probe element can be easily identified. Furthermore, provision is made for assessors to note comments or other information that would be helpful to a counselor during his discussions with assessees. Information taken from the assessor reports, when coupled with knowledge of the requirements of relevant probes, will enable counselors to discuss the performance of assessees in terms of concrete problems and actions rather than general impressions.

The simulations were developed according to a "modular" concept. That is, each module is a self-contained package that contains all information and materials needed to make the simulation operational and to perform the associated assessments effectively. For best results, the directions, procedures, and schedules that have been provided should be followed without deviation. It is only through careful adherence to the specified protocols that validity and reliability of results can be maintained. Any modifications in content or procedure should be accomplished only after careful and thorough consideration of their potential effects upon assessment results.

Determination of the predictive validity of the simulations must await the accumulation of normative and criterion data. However, "face validity" seems well established and it appears reasonable that scores derived from behavioral observations during the simulations should possess some built-in validity because of the similarity of the performance evaluated to that required on job.

Reliability of the scores should, of course, be established as data accumulates. In the meantime, every effort should be made to insure maintenance of conditions conducive to reliability. Like all of the assessment techniques except paper-and-pencil tests, scores on the simulations are based upon the observations and judgments of assessors. In any scoring technique that requires the judgments of human observers, by far the best means for insuring reliability is (a) development of strict procedures and criteria for making judgments and (b) intensive training of observers to use the procedures and make the judgments. With respect to the simulations, the assessor materials were designed to provide procedures and criteria for making judgments. Therefore, the degree of reliability to be achieved by simulation scores appears to be mainly dependent upon the level of competence that can be achieved by assessors through training. Materials for conducting such training are a part of each simulation module.

Other products of this project, in addition to the required technical report, were:

- (1) Materials and procedures for administering simulations for three levels of military personnel.
- (2) Materials and procedures for conducting assessments of performance in the simulations.
- (3) Materials and procedures for training staff personnel to administer the simulations and conduct the associated assessments effectively.

A fundamental feature of these products is their practicability. Because they were designed and developed for use by operating personnel, the products include all of the information, guidance, and instructions required to implement them without further developmental work.

Aside from the applicability of the products, probably the most significant conclusion to be drawn from the accomplished work is that organizational simulations can and should be integral parts of any assessment center program. Although the development of simulations is a complicated and somewhat expensive process, the result is an assessment technique that is both efficient and relevant for operational requirements.

APPENDICES

Appendix A

PROBE ELEMENTS

SENIOR COMPANY-GRADE OFFICER ASSESSMENT SIMULATION

PROBE MANUAL

Input Number	Probe Element Number	Controller	Injection Time	Scoring	Probe Name
65 (S)	28-5-1	Company 3rd Plt Ldr	1214	CAR 32	Hot PZ

SITUATION:

1. At 1200 hours, 3rd Platoon Leader reported reaching his designated PZ (855707). The platoon was located at 855708 (approximately) or 85457085 (precisely). 3rd Platoon Leader stated that he would call back when the platoon had secured the PZ.
2. In scanning the PZ with his binoculars, he discovers three guerrillas just inside the tree-line at the SE end of the PZ. He estimates their location to be 855706. There are no other guerrillas visible around the positions but it sounds like some more in the jungle. They appear to be preparing positions.
3. 3rd Platoon has taken cover on the NW end of the PZ and has not been observed by the guerrillas.
4. The short grass and low, scattered bushes on the PZ will provide the platoon very little concealment and no cover should the platoon attempt to cross the PZ to engage the guerrillas. Similarly, vegetation along the sides of the PZ is so sparse that movement around the PZ to flank the guerrillas would be very slow and hazardous. A wider movement in either direction, to take advantage of denser vegetation away from the PZ, would be even more time consuming.
5. 3rd Platoon Leader calls company commander:

MESSAGE: My lead squad just spotted three guerrillas on the far side of the PZ. They appear to be preparing a position. Sounds like some more further back in the jungle. What should I do?

(Continued)

Possible Player Responses	Contingent Controller Inputs/Responses
1. "Rogers" message; queries 3rd Platoon Leader for more details.	a. Provide full details. (Reference <u>Situation</u> , above, and details given in Input Number 63(S).)
2. Directs 3rd Platoon Leader to remain concealed; states that he will contact battalion to explore possibility of platoon using another PZ.	a. "Roger" message. State that you will await his call.
3. Directs 3rd Platoon Leader to eliminate guerrillas with his own resources (e.g., by fire and maneuver, use of grenade launchers, use of 90mm RR, or any combination).	<p>a. Point out that the combination of level terrain and sparse vegetation makes it virtually impossible to maneuver effectively in the short time left before the helicopters are due to arrive. You feel that grenade launcher or 90mm RR fire would likely cause them to scatter without eliminating them. You feel that, unless actually eliminated, they will be able to fire on the helicopters and prevent pickup of the platoon.</p> <p>b. In lieu of offensive action by the platoon, request REDLEG support. State the REDLEG support will serve the dual purpose of helping to eliminate the position and of providing cover under which your platoon can move to completely eliminate the position. The guerrillas are located at <u>855706</u>.</p>
4. Directs REDLEG to provide support.	a. "Roger" message. State that you will get it on the way at once.
5. Directs BLUELEG to provide support.	<p>a. Recommend use of REDLEG. Point out that the one mortar now available cannot provide the heavy volume of fire that is needed in this situation.</p> <p><u>Guidance:</u> Inform Battalion Controller that you have injected this message and that company commander may report incident to battalion. Battalion Controller should "roger" any such report.</p>

(End)

SENIOR COMPANY-GRADE OFFICER ASSESSMENT SIMULATION

PROBE MANUAL

Input Number	Probe Element Number	Controller	Injection Time	Scoring	Probe Name
67 (S)	28-5-2	Company 3rd Plt Ldr	1219	None	Hot PZ

SITUATION:

1. Actions taken by company commander are effective.
2. 3rd Platoon Leader calls company commander:

MESSAGE: Fire on the woodline was really effective. We are moving out to check the area at this time.

Possible Player Responses	Contingent Controller Inputs/Responses
<ol style="list-style-type: none"> 1. "Rogers" message, with or without questions. 	<ol style="list-style-type: none"> a. Respond to questions by saying that you think you got some; no fire coming from woods; will depart as soon as possible.

(End)

SENIOR COMPANY-GRADE OFFICER ASSESSMENT SIMULATION

PROBE MANUAL

Input Number	Probe Element Number	Controller	Injection Time	Scoring	Probe Name
68 (S)	28-5-3	Company 3rd Plt Ldr	1225	CAR 33	Hot PZ

SITUATION:

1. 3rd Platoon has reached and searched the guerrilla position. They found four guerrillas, all dead. A machinegun was destroyed. Three of the guerrillas were armed with rifles. None of the guerrillas have papers or anything of intelligence value. There are indications (i.e., blood trails) that there were at least two other guerrillas in or around the position. The platoon has not sustained any casualties.
2. 3rd Platoon Leader calls company commander:

MESSAGE: We have found four bodies, all of them all torn up. A machinegun which is destroyed. So far as I can tell, they never even fired a shot. It was a complete surprise to them. And we've found two blood trails leading off to the south. I'm going to send a squad out that way to see what they can find.

(Continued)

Possible Player Responses	Contingent Controller Inputs/Responses
1. Disapproves dispatch of squad to follow blood trails; directs 3rd Platoon Leader to secure PZ.	a. "Roger" message; state you will report when PZ is secured.
2. Approves dispatch of squad to follow blood trails, with or without issuing instructions regarding securing of PZ.	a. "Roger" message, then immediately say, in substance, that two more guerrillas, both dead, have just been found a few meters away, in tall grass. You will report when the PZ is secured.

(End)

SENIOR COMPANY-GRADE OFFICER ASSESSMENT SIMULATION

PROBE MANUAL

Input Number	Probe Element Number	Controller	Injection Time	Scoring	Probe Name
69 (C)	28-5-4	Battalion S3	1225 +	BAR 17	Hot PZ

SITUATION:

1. 3rd Platoon Leader has reported seizure of the guerrilla position. There were four dead guerrillas with indications that at least two had escaped. The platoon found a destroyed machinegun and three rifles, apparently the only other weapons the guerrillas had. There were no items of intelligence value on the bodies. 3rd Platoon did not sustain any casualties.

GUIDANCE: It is assumed that company commander will inform battalion.

Possible Player Responses	Contingent Controller Inputs/Responses
1. Informs battalion, with or without providing all details.	a. "Roger" message. Commend company commander on 3rd Platoon's fine performance.

(End)

SENIOR COMPANY-GRADE OFFICER ASSESSMENT SIMULATION

PROBE MANUAL

Input Number	Probe Element Number	Controller	Injection Time	Scoring	Probe Name
70 (S)	28-5-5	Company 3rd Plt Ldr	1230	None	Hot PZ

SITUATION:

1. 3rd Platoon has secured its PZ and is awaiting arrival of the helicopters.
2. 3rd Platoon Leader calls company commander:

MESSAGE: Our PZ is secured. We're ready to go.

Possible Player Responses	Contingent Controller Inputs/Responses
1. "Rogers" message.	a. None.
	(End)

Appendix B

GLOBAL RATING FORMS

DIMENSION

SOCIAL SKILLS (INTERPERSONAL COMPETENCE)

Characteristics of Effectiveness

Dealing effectively with others by quickly diagnosing important aspects of interpersonal situations; reacting sensitively to the needs of others; communicating sincerity and a genuine interest in others; maintaining or increasing the self-esteem of others during his interaction with them; generating willing acceptance of his influence.

Characteristics of Ineffectiveness

Dealing ineffectively with others by focusing almost entirely on the task and ignoring needs of others during his interaction with them; showing little awareness or concern about the effects of his behavior on others; attempting to dominate others rather than working toward cooperation and mutual trust; damaging the self-esteem of others.

	5
	4
	3
	2
	1

DIMENSION
COMMUNICATION SKILLS

Characteristics of Effectiveness

Communicating effectively with others by presenting ideas or facts in a clear and concise manner; organizing the content of his communications into a logical order; achieving an appropriate level of detail; articulating clearly; displaying an appropriate vocabulary level; demonstrating accurate understanding of communications addressed to him; using jargon or special language only when it facilitates communication; obtaining feedback from his listener to test understanding of his communications.

	5
	4
	3
	2
	1

Characteristics of Ineffectiveness

Communicating ineffectively with others by omitting or obscuring critical ideas or facts; distracting listeners by using emotion-laden terms or language; speaking hesitantly; asking irrelevant questions; irritating listeners by belaboring points; making distracting grammatical errors.

DIMENSION
ADAPTABILITY

Characteristics of Effectiveness

Adapting effectively to situational demands by maintaining an even performance level throughout periods of stress; maintaining an even emotional level during stress; providing emotional support for others during periods of stress; controlling anger and aggressiveness during periods of interpersonal conflict; creating satisfactory compromises to reconcile interpersonal conflict; reversing or modifying a previously established position when new information becomes available; changing strategies easily when significant changes occur in the situation.

Characteristics of Ineffectiveness

Adapting ineffectively to situational demands by behaving erratically under stress; refusing to give conflicting viewpoints an adequate hearing; rigidly pursuing one strategy in the face of changing situational demands; ignoring or misperceiving feedback reflecting the effects of his behavior on the environment; reacting negatively to organizational or procedural change.

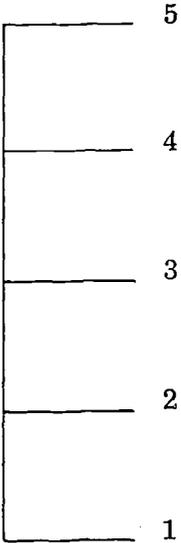
	5
	4
	3
	2
	1

DIMENSION

MOTIVATION

Characteristics of Effectiveness

Maintains a high level of motivation as evidenced by approaching new tasks in a positive manner; desiring to complete work on time; maintaining realistically high standards for the quality of work; persevering in the face of barriers to task accomplishment; displaying high level of concentration upon accomplishment of objectives or missions.



Characteristics of Ineffectiveness

Maintains a low level of motivation by taking a negative attitude toward initiating new tasks; maintaining quality standards which are lower than can be tolerated by the organization; pursuing personal goals at the expense of organizational goals; failing to display any initiative in performing duties or solving problems.

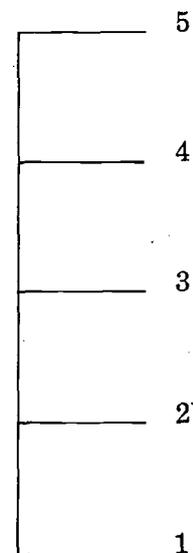
DIMENSION
FORCEFULNESS

Characteristics of Effectiveness

Maintaining an effectively forceful behavioral style by communicating his confidence in himself to others; expressing little anxiety about future outcomes; undertaking activities with vigor and enthusiasm; maintaining a high concentration level; maintaining an orientation toward actively influencing the future rather than passively accepting events as they come; taking responsibility for making appropriate decisions in the absence of supporting instructions; taking calculated risks based on sound judgment.

Characteristics of Ineffectiveness

Maintaining an ineffective behavioral style by communicating doubts about the capabilities of himself or his unit; reacting to environmental demands in a lethargic or apathetic manner; becoming easily fatigued; requiring outside stimulation before acting rather than being self-starting; attempting to blame others rather than assuming sole responsibility for own actions; preferring cautious actions which have minimal failure consequences if unsuccessful to risky actions which have maximum reward consequences if successful.



DIMENSION

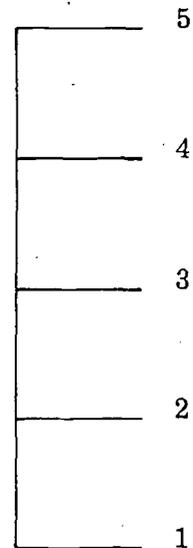
DECISION MAKING

Characteristics of Effectiveness

Making effective decisions by identifying the major aspects of the problem; actively searching for facts relevant to the decision; evolving decisions which are technically correct in view of available information and circumstances; producing decisions which are timely in view of requirements of the task or situation; taking into account all possible contingencies, alternatives, and possibilities; making all decisions which are properly his to make.

Characteristics of Ineffectiveness

Making ineffective decisions by ignoring or overlooking sources of relevant information; focusing narrowly on relatively minor aspects of the problem; vacillating indecisively beyond the time frame in which an optimal decision can be implemented; refusing to accept decision-making responsibility which is properly his by referring it upward or downward.



DIMENSION

ADMINISTRATIVE SKILLS

Characteristics of Effectiveness

Administering his command effectively by identifying or developing the optimum organizational structure for accomplishing tasks and implementing decisions; determining the priorities of several tasks or subtasks; identifying the time requirements for accomplishing a given task; allocating resources; identifying responsibilities which should be delegated to subordinates; issuing appropriate orders and instructions.

	5
	4
	3
	2
	1

Characteristics of Ineffectiveness

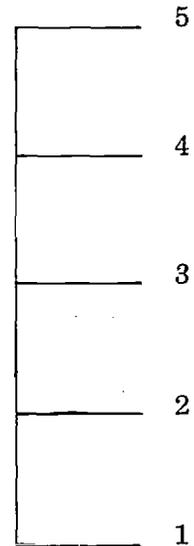
Administering his command ineffectively by improper sequencing of tasks; setting unrealistic time deadlines; overlooking viable alternative work organizations; miscalculating the capabilities of available personnel; issuing improper orders or instructions; over-directing once work is underway.

DIMENSION

ORGANIZATIONAL IDENTIFICATION

Characteristics of Effectiveness

Displaying effective organizational identification by rational observance of military courtesy; maintaining a professional military manner; complying with the spirit and underlying goals of superiors' directives; subordinating his own interests to those of the organization; displaying concern for the welfare and success of the organization.



Characteristics of Ineffectiveness

Displaying ineffective organizational identification by setting an example of unprofessionalism; under- or overemphasizing the observance of military courtesy; acting to enhance his own reputation at the expense of effective achievement of organizational goals; displaying lack of concern for the welfare and success of the overall organization.

DIMENSION

EFFECTIVENESS IN ORGANIZATIONAL LEADERSHIP ROLE

Characteristics of Effectiveness

Displaying effectiveness in the organizational leadership role by avoiding criticism of his superiors or the organization in downward communications to subordinates; filtering incoming information and communicating all potentially important information to superiors; maintaining poise when interacting with superiors; providing meaningful recommendations; reconciling conflicting expectations from superiors and subordinates; using chain of command appropriately for accomplishing tasks or missions.

Characteristics of Ineffectiveness

Displays ineffectiveness in the organizational leadership role by clogging information channels with trivial or obsolete information; undermining the legitimacy of his superiors' authority in downward communications; displaying distress when the requirements of his role are ambiguous or internally conflicting; engages in destructive competition with peers; violating chain of command without justification.

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DIMENSION
SUPERVISORY SKILLS

Characteristics of Effectiveness

Supervising effectively by assigning specific goals; defining performance standards which will be acceptable; taking action on factors that interfere with subordinates' performance; providing all "need to know" information to subordinates; representing his subordinates whenever their problems must be referred elsewhere for action; encouraging upward communication from his subordinates; defining the benefits subordinates may expect to receive in return for high performance; administering the rewards at his disposal for high performance; criticizing specific acts rather than individuals as persons; explaining, when appropriate, why assigned tasks must be accomplished; fostering unit pride and confidence in its capabilities to successfully complete assigned missions; recognizing opportunities to counsel, train, and develop his subordinates.

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Characteristics of Ineffectiveness

Supervising ineffectively by failing to inform subordinates of how and when performance will be evaluated; accepting low standards of job performance; withholding needed information from subordinates; discouraging creativity and initiative from his subordinates; refusing to strongly represent his subordinates whenever there is a risk of antagonizing his superiors; threatening punishment for poor performance rather than emphasizing reward for a high performance when motivating subordinates prior to a mission; ignoring or overlooking the use of praise as a reward for high performance; criticizing subordinates in an emotional or aggressive manner; conducting critiques of individual or unit performance in a hostile or destructive manner.

DIMENSION

TECHNICAL AND TACTICAL COMPETENCE

Characteristics of Effectiveness

Displays effective technical and tactical competence by appropriately utilizing map reading skills; maintaining knowledge of Army regulations; recognizing or recalling important technical facts or figures; employing knowledge of small unit tactics; applying job knowledge appropriately to tactical or technical decisions.

Characteristics of Ineffectiveness

Displays ineffective technical and tactical competence by misinterpreting map data; demonstrating poor understanding of orders and directives; making or approving tactically unsound decisions; deviates from doctrine without apparent reason.

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Appendix C

LEADERSHIP DIMENSIONS AND GENERAL INDICATORS

Leadership Dimensions and General Indicators

<u>Dimension</u>	<u>Gross Indicator</u>
1. Social Skills (Interpersonal Competence)	a. Effectiveness in interpersonal situations b. Positive impression c. Effectiveness in influencing others
2. Communication Skills	a. Skill in informal oral communication b. Skill in formal oral communication c. Skill in written communication d. Skill in understanding communication (oral and written)
3. Adaptability	a. Tolerance of stress b. Tolerance of conflict c. Behavioral flexibility
4. Motivation	a. Work motivation b. Social motivation c. Achievement motivation
5. Forcefulness	a. Self-confidence b. Energy level c. Display of initiative d. Acceptance or taking of responsibility e. Risk taking
6. Mental Ability	a. Intellectual ability b. Creative and innovative ability
7. Decision Making	a. Decisiveness b. Use of available information c. Decision quality
8. Administrative Skills	a. Organizational ability b. Planning ability c. Directing ability
9. Organizational Identification	a. Congruence of own values with Army values
10. Effectiveness in Organizational Leadership Role	a. Effectiveness in working with superiors b. Effectiveness in working with peers c. Effectiveness in interracial situations d. Tolerance for role ambiguity e. Use of chain of command

Leadership Dimensions and General Indicators (Cont'd)

<u>Dimension</u>	<u>Gross Indicator</u>
11. Supervisory Skills	<ul style="list-style-type: none">a. Defining expectations for subordinatesb. Effective facilitation of subordinates' tasksc. Effective support of subordinatesd. Motivating subordinatese. Developing morale and unit cohesionf. Quality control of subordinates and unit performanceg. Effective use of staff
12. Physical Competence	<ul style="list-style-type: none">a. Endurance and stamina
13. Technical Competence	<ul style="list-style-type: none">a. Knowledge of technical aspects required of present level (job knowledge)b. Effective application of technical knowledge
14. Problem Solving	<ul style="list-style-type: none">a. Use of available informationb. Correct identification of essential problem elementsc. Quality of solution

Appendix D

**SCENARIO OUTLINE,
SENIOR NONCOMMISSIONED OFFICER SIMULATION**

SCENARIO OUTLINE

Senior Noncommissioned Officer Assessment Simulation

1. Overview

- a. At 0700 hours this morning, 18 March 197__, 1st Infantry Brigade 21st Infantry Division, began a two-battalion air assault into AO LIME and AO LEMON. The mission is stability operations, to consist of strike operations and civic action. 1st Battalion, 76th Infantry (Mechanized) is clearing and securing Route APPLE, which is to be the supply route into the new area. The most critical point on Route APPLE is the bridge over the Khlung Sam Pa Bong (732739), the only unfordable stream on the route. However, 1-76 cannot reach the bridge until approximately four hours after the air assault begins. To insure that the enemy does not destroy the bridge when the air assault begins, 1st Brigade, yesterday, at 1700 hours, air-landed HEADSTART at the bridge site, with the mission to secure the bridge and the surrounding area until the arrival of 1-76.

HEADSTART is composed of 1st Platoon of the Brigade reaction force (Company A, 1st Battalion, 66th Infantry) and an 81mm mortar squad HEADSTART is commanded by 1st Platoon Leader and is under operational control of 1/66th Infantry.

- b. In securing the bridge, the Platoon Leader was wounded. The Platoon Sergeant assumed command, evacuated the Platoon Leader, and deployed the platoon at the bridge site. The night passed without incident.
- c. At 0700 hours this morning, the Platoon Sergeant, acting as commander of HEADSTART, and as had been directed by S2, dispatched two squad-size reconnaissance patrols. The remaining rifle squad, the weapons squad, and the attached mortar squad are manning positions at the bridge site. The patrols are reporting situations they encounter and the squads at the bridge site are reporting events as they occur.
- d. The assessee, as Platoon Sergeant (Acting Commander) of HEADSTART, begins participation in the simulation at 1000 hours (simulation time). Concurrent with his interactions with his subordinates (and, on occasion, with superiors), on these situations and events, the subject is receiving communications from Battalion. Some of these involve interaction only with Battalion; others necessitate further interaction with subordinates. Included is face-to-face interaction with the Battalion Commander during a visit of the Battalion Commander to the bridge site.
- e. At 1136 hours, the subject receives a warning order for a change of mission involving aerial movement to a new area and, at 1151 hours, a fragmentary order for the operation.
- f. From 1151 hours to 1324 hours, the subject is involved in preparing for the forthcoming operation, including movement of one of his patrols for in-the-field pickup and movement to the new area without returning to the bridge site.
- g. At 1324 hours, the subject (with his platoon) begins movement to the new area and "lands" at 1329 hours.

- h. From 1329 hours to 1500 hours (end of simulation), the platoon operates in the new position. During this period, the platoon becomes progressively more heavily engaged with the enemy. Ultimately, the situation reaches the point at which accomplishment of mission, even survival of the platoon, is seriously threatened.

2. Outline of Events

a. 1700 17 March - 1000 18 March.

- (1) HEADSTART lands vicinity bridge site.
- (2) Platoon leader and radiotelephone operator are wounded; platoon sergeant assumes command.
- (3) Bridge is secured; lone guard is captured.
- (4) Platoon leader, radiotelephone operator, and prisoner are evacuated.
- (5) Platoon position is established.
- (6) Night passes without unusual events.
- (7) Platoon completes breakfast meal—0630 hours, 18 March.
- (8) Patrols from platoon depart platoon base 0700 hours, 18 March.
- (9) Brigade forces begin landings in new areas 0700 hours, 18 March; make immediate contact with enemy.
- (10) Patrols report locations and information obtained.
- (11) Squads at bridge site continue preparation of positions.
- (12) S3 informs platoon sergeant that battalion commander is enroute to platoon position.

b. 1000 18 March - 1151 18 March (Phase I - low pressure - entry of assessee into simulation).

- (1) Squads on patrol give hourly position reports.
- (2) Battalion commander arrives at platoon position; before departing, gives platoon sergeant command guidance on conduct of mission.
- (3) S3 gives platoon sergeant situation report on 1-76 Inf.
- (4) 1st Squad makes contact; captures prisoner who subsequently commits suicide.
- (5) 2nd Squad makes contact; employs artillery and discovers four dead guerrillas; one squad member sustains leg injury and is evacuated.
- (6) 1st Squad fails to submit hourly position report.
- (7) S2 provides feedback of information obtained from prisoner captured by platoon yesterday.
- (8) S4 requests an ammo report, to be submitted during 1300-1315 Admin-Log Net period.
- (9) 2nd Squad, following blood signs, discovers a fifth dead guerrilla, continues following blood signs.
- (10) S3 gives platoon sergeant ETA of 1-76 Inf at bridge.
- (11) 2nd Squad reports a clear area—a potential helicopter LZ—is planted with explosives and anti-helicopter devices.
- (12) Platoon sergeant receives warning order for a new mission.
- (13) 1st and 2nd squads report they can return to bridge quickly. 2nd Squad reports finding sixth dead guerrilla.
- (14) 2nd Squad reports location of village not on map; reports that interpreter has set village on fire.
- (15) Platoon sergeant receives written fragmentary order for new mission.

c. 1151 18 March - 1329 18 March (Phase II - medium pressure).

- (1) 3rd Squad Leader informs platoon sergeant that he and his men feel the new mission is too much for the platoon to handle.
- (2) 2nd Squad Leader reports ETA at bridge.
- (3) The lead company of 1-76 Inf arrives at the bridge; begins process of taking over from platoon.
- (4) S3 informs platoon sergeant that a certain lot of 90mm ammunition may contain defective rounds.
- (5) 1st Squad, returning to bridge, is ambushed.
- (6) 1st Squad Leader reports squad is in danger of being overrun.
- (7) 2nd Squad arrives at bridge.
- (8) 1st Squad breaks contact at ambush; moves to locate LZ to evacuate two seriously wounded men.
- (9) Wounded men of 1st Squad are evacuated.
- (10) 1st Squad Leader reports that, moving on foot, the squad cannot reach the bridge by departure time.
- (11) S3 arranges for 1st Squad to be picked up by the helicopters that will transport the platoon to the new mission area.
- (12) 3rd Squad Leader reports that two of his men, both "short timers," have implied that they may refuse to go on the new mission.
- (13) 1st Squad is picked up by helicopters and is enroute to the bridge.
- (14) Helicopters to carry platoon to new area arrive; loading begins.
- (15) Helicopters bearing platoon depart for new area.
- (16) Platoon lands at LZ near new mission site.

d. 1329 18 March - 1500 18 March (Phase III - high pressure).

- (1) Platoon clears LZ; moves toward mission site.
- (2) Platoon sergeant is informed that 3rd Squad's radio is defective and that the platoon's Claymores were left at the bridge.
- (3) Platoon reaches mission site; squads begin preparing positions.
- (4) Weather begins to close in.
- (5) S2 informs platoon sergeant of enemy activity 1000 meters west of platoon's position.
- (6) Squad leaders submit progress reports.
- (7) S3 informs platoon sergeant that platoon will not be lifted out before dark, as planned; states platoon's stay is extended until next afternoon; suggests platoon sergeant order extra supplies.
- (8) 1st Squad spots three guerrillas approaching platoon's position.
- (9) The Chief of a nearby village contacts platoon seeking assurance of safety of village.
- (10) 3rd Squad leader reports sighting two guerrillas who apparently are reconnoitering the platoon's position.
- (11) 1st Squad kills the three guerrillas it spotted earlier.
- (12) Heavy rain begins.
- (13) S3 informs platoon-sergeant that helicopter bringing supplies to platoon apparently has been shot down about 1500 meters west of the platoon's position. No more supply flights can be made until the rain lets up.
- (14) S3 informs platoon sergeant that the Division Commander has been wounded and is not expected to live. His son is in the platoon and is to be sent back when the supply helicopter is able to reach the platoon.

- (15) S3 relays reports of a guerrilla company located about 1000 meters west of platoon's position; informs platoon sergeant that Company A, 1-76 Inf is on way to relieve the platoon.
- (16) 1st Squad Leader reports indications of enemy presence to west of platoon's position.
- (17) 3rd Squad Leader reports enemy presence to west of platoon's position.
- (18) 2nd Squad kills a guerrilla coming from the north.
- (19) 3rd Squad kills six guerrillas coming from the west.
- (20) Forecast is for clear flying weather by 1600.
- (21) 1st Squad receives scattered mortar fire from the west.
- (22) 1st Squad receives machinegun fire from the west.
- (23) The platoon's 81mm mortar is disabled.
- (24) 1st Squad comes under heavy attack from west.
- (25) The rain stops.
- (26) Attack on 1st Squad continues. 1st Squad Leader reports the squad will not be able to stop the guerrillas.
- (27) 2nd Squad kills a guerrilla who, before he dies, identifies the unit attacking the platoon.
- (28) 2nd Squad captures a prisoner coming from the north.
- (29) 1st Squad reports guerrilla attack completely defeated.
- (30) Company A, 1-76 Inf arrives at platoon's position.

Appendix E

**SCENARIO OUTLINE,
JUNIOR COMPANY-GRADE OFFICER SIMULATION**

SCENARIO OUTLINE

(Junior Company-Grade Officer Assessment Simulation)

1. Overview

- a. Two days ago, Company A, 1st Battalion, 66th Infantry, 1st Infantry Brigade, 21st Infantry Division, left Fort Benning, Georgia. The mission is Adventure Training, to consist of a variety of activities.
- b. Several activities planned for this, the last day of Adventure Training, were cancelled when the company's support was requested in a search for two (2) missing Cub Scouts.
- c. At 0600 hours this morning the company had begun preparation for the day's scheduled activities and for departure to Fort Benning in the afternoon. At 0800 hours the company commander learned of the request for assistance in the search operation and cancelled all scheduled activities.
- d. The assessee, as Platoon Leader of the 1st Platoon, begins participation in the simulation at 1000 hours (simulation time). The subject interacts with both his superior and his subordinates.
- e. At 1133 hours the subject receives first notice of a change in mission involving movement to a new area and, at 1200 hours, an operations order is initiated.
- f. From 1200 hours to 1434 hours the subject is involved in a search, rescue, and assistance operation in a nearby town which had suffered a natural disaster.
- g. At 1434 hours (end of simulation), the situation has reached the point at which survival of the platoon is threatened.

2. Outline of Events

- a. 0600 hours - 1000 hours.
 - (1) Breakfast meal completed.
 - (2) Camp is broken.
 - (3) Vehicles are packed.
 - (4) Company assistance in search for lost boys is requested.
 - (5) Company commander obtained information.
 - (6) Preparations made for search.
 - (7) Company operations order issued.
 - (8) Platoon CP and assembly point established.
 - (9) Initiation of search activities.
- b. 1000 hours - 1131 hours (Phase I - low pressure - entry of assessee into simulation).
 - (1) Squads on patrol give half-hourly position reports.
 - (2) CO coordinates with platoon.
 - (3) 3rd Squad wants to turn back.
 - (4) 2nd Squad member bitten by a snake.
 - (5) 2nd Squad discovers a section cut from a fence with signs of recent activity.
 - (6) 1st Squad member misses his weapon.

- (7) 1st Squad finds a still.
- (8) 2nd Squad finds a jacket belonging to one of the lost boys.
- (9) 3rd Squad fails to submit half-hourly position report.
- (10) Platoon leader learns one of his men is Soldier of the Month.
- (11) 3rd Squad is off course.
- (12) 1st Squad locates the wrong boy.
- (13) 1st Squad member falls in a creek.
- (14) Squads on patrol give half-hourly position reports.
- (15) CO checks on squads' progress.
- (16) Platoon members cautioned about hunters.
- (17) Platoon Leader informed dogs are to be used in the search.
- (18) Platoon Leader warned of severe weather approaching.
- (19) Lost boys are found.
- (20) Platoon members start out on return to Platoon CP.

c. 1133 - 1434 (Phase II - high pressure).

- (1) The Platoon Leader receives first notice of a disaster in Asheboro.
- (2) The Platoon Leader checks to determine expertise represented in his platoon.
- (3) The operations order is issued by radio.
- (4) The platoon travels into Asheboro.
- (5) The Platoon Leader gets a break.
- (6) The remainder of the operations order is issued.
- (7) The squads prepare to move out.
- (8) 2nd Squad finds live power lines down.
- (9) 1st and 3rd Squads report beginning operation.
- (10) 3rd Squad finds a bleeding teenage boy.
- (11) The Platoon Sergeant is injured and hospitalized.
- (12) The CO and the civilian agencies are snowed by other calls.
- (13) 1st Squad finds a broken fire hydrant.
- (14) 2nd Squad finds an ambulance immobilized.
- (15) The CO and civilian agencies are available again.
- (16) 3rd Squad finds a fire.
- (17) 1st Squad finds a smoking tractor-trailer truck with the driver inside.
- (18) CO requests report of Squads' progress.
- (19) Platoon Leader is asked for a generator to help a meat packer.
- (20) First report of a fire in the north end of town.
- (21) 1st Squad checked out possible injured citizens.
- (22) 1st Squad finds a pregnant woman trapped in a car.
- (23) 2nd Squad finds a street blocked by fallen trees.
- (24) 2nd Squad finds a bank window broken.
- (25) CO warns Platoon Leader about possible looting.
- (26) 2nd Squad finds a body.
- (27) 1st Squad finds some suspected looters.
- (28) 2nd Squad member is injured.
- (29) 2nd Squad takes several homeless citizens to a temporary shelter.
- (30) CO requests an estimate of injured and dead.
- (31) 3rd Squad Leader wants to evacuate a residential area.
- (32) 1st Squad is confronted by several possible looters.

- (33) 3rd Squad finds two civilian groups from different civilian agencies competing for an area.
- (34) 1st and 3rd Squads find a number of victims.
- (35) 2nd Squad helps clear a traffic jam.
- (36) 3rd Squad member is commended by the Mayor.
- (37) CO requests a status report.
- (38) 1st Squad reports a large pile-up of cars.
- (39) All squads go to the Union Carbide plant which exploded.

Appendix F

**SCENARIO OUTLINE,
SENIOR COMPANY-GRADE OFFICER SIMULATION**

SCENARIO OUTLINE

(Senior Company-Grade Officer Assessment Simulation)

1. Overview

- a. Two days ago, 160700 March 197__, 1st Light Infantry Brigade (Separate), a part of U.S. I Corps, began operations in a new area which is divided into AO LEMON, AO LIME, AO LINEN, and AO LOCK. The mission is stability operations, to consist of strike operations and civic action.
- b. Yesterday, 170900 March 197__, 1st Battalion, 66th Infantry, a maneuver battalion of 1st Light Infantry Brigade (Separate) began air assaulting into AO LEMON. Landings were unopposed and all elements of 1-66 Inf had closed into AO LEMON by 1000 hours. Companies A, B, and C established company bases and conducted security patrols in their areas; Company D secured the battalion base. Last night, Companies A, B, and C established fire-team-size ambushes on routes of approach into their bases.
- c. At 0700 hours this morning, the rifle platoons of Company A departed on search-and-attack patrols, with target-of-opportunity missions. The patrols are reporting locations hourly and reporting situations they encounter. The mortar platoon of Company A is securing the company base. The platoon's mortars are in the rear, to be delivered tomorrow.
- d. The assessee, as Commanding Officer of Company A, begins participation in the simulation at 1000 hours (simulation time). Concurrent with his interactions with his subordinates (and, on occasion, with his superiors) relative to situations and events, the assessee is receiving communications from battalion. Some of these involve interaction only with battalion; others necessitate further interaction with subordinates. Included is face-to-face interaction with the battalion commander during a visit of the battalion commander to the company base.
- e. At 1110 hours, the assessee receives a warning order for a change of mission involving allied movement to a new area and, at 1127 hours, an operation order for the new mission.
- f. From 1127 hours to 1246 hours, the assessee is involved in preparing for the new mission, including movement of his patrols for in-the-field pickup and movement to the new area without returning to the company base.
- g. At 1246 hours, the assessee (with his company) begins movement to the new area and "lands" at 1300 hours.
- h. From 1300 hours to 1500 hours (end of simulation), the company operates in the new area. During this period, the company becomes progressively more heavily engaged with the enemy. Ultimately, the situation reaches the point at which accomplishment of the mission, even survival of the company, is seriously threatened.

2. Outline of Events

a. 0900 17 March - 1000 18 March.

- (1) 1-66 Inf completes landings in AO LEMON.
- (2) Companies secure battalion and company bases.
- (3) Battalion commander suffers mild heart attack and is evacuated.
- (4) New battalion commander arrives; announces intention to visit company bases tomorrow (18 March).
- (5) Night passes without unusual events.
- (6) Patrols from Company A depart company base 0700 hours 18 March.
- (7) Patrols report locations and information obtained.
- (8) S3 informs company commander that battalion commander is enroute to company base.

b. 1000 18 March - 1127 18 March (Phase I - low pressure - entry of assessee into simulation).

- (1) Platoons on patrol give position and situation reports.
- (2) Battalion commander arrives at company base; before departing, gives company commander guidance on conduct of mission.
- (3) S3 informs company commander that a BRAVO company patrol has captured a prisoner.
- (4) 3rd Platoon reports location of village in which several people apparently have typhus fever.
- (5) S2 informs company commander that challenge and password have been compromised; alternate is to be used.
- (6) 1st Platoon kills a sniper; one patrol member is wounded.
- (7) S2 provides company commander information obtained from BRAVO Company's prisoner.
- (8) A 2nd Platoon member becomes separated from patrol.
- (9) 3rd Platoon captures prisoner who subsequently commits suicide.
- (10) 1st Platoon discovers cart tracks on a trail; trail not on map.
- (11) S2 informs company commander that company net frequency may be compromised.
- (12) 2nd Platoon's lost soldier rejoins patrol.
- (13) 3rd Platoon fails to submit periodic position report.
- (14) S1 informs company commander that papers pertaining to 4th Platoon Leader's R & R cannot be found.
- (15) S4 directs company commander to submit a report on individuals returning from the hospital without weapons or with wrong weapons.
- (16) Company commander receives warning order for new mission.
- (17) S3 provides company commander information regarding his 81mm mortars.
- (18) XO rejoins company.
- (19) Company commander receives written operation order for new mission.

c. 1127 18 March - 1300 18 March (Phase II - medium pressure).

- (1) 1st Platoon reports location of village not on map; reports that interpreter has set village on fire.
- (2) 2nd Platoon Leader reports that several of his men whose ETS are near feel that it is unfair for them to be required to go on the new mission.
- (3) 1st Platoon makes contact with a guerrilla squad.
- (4) S3 informs company commander that he is working on a plan for air-lifting the patrols back to the company base.

- (5) BRAVO Company lands in the new area.
- (6) The Chief of a nearby village contacts 3rd Platoon seeking assurance of safety of village.
- (7) S3 explains plan for in-the-field pickup of the platoons on patrol.
- (8) S3 informs company commander that 1-64 Inf is having a tough fight in the new area.
- (9) CHARLIE Company lands in the new area.
- (10) Platoons report reaching their PZs.
- (11) 3rd Platoon reports presence of enemy on his PZ.
- (12) 3rd Platoon secures its PZ; submits situation report.
- (13) DELTA Company lands in new area; reports receiving sniper fire.
- (14) All elements of company are picked up and begin movement to new area.
- (15) Company lands in new area.

d. 1300 18 March - 1500 18 March (Phase III - high pressure).

- (1) S4 informs company commander of defective 90mm RR ammunition.
- (2) S3 informs company commander of refugees.
- (3) Rifle platoons report arrival on positions.
- (4) Guerrilla unit opposing 1-66 Inf is identified.
- (5) 3rd Platoon Leader reports discovery of deep draw and well-used trail north of his position.
- (6) Probing actions begin against BRAVO, CHARLIE, and DELTA Companies.
- (7) Contact patrol to BRAVO Company returns.
- (8) 3rd Platoon kills guerrilla on trail north of position. Guerrilla is member of unit not known to be in area.
- (9) 1st Platoon Leader reports movement to his front.
- (10) Probing actions against 1-66 Inf increase.
- (11) 2nd Platoon receives mortar fire from direction in which no enemy is known to be.
- (12) 4th Platoon Leader requests additional ammunition.
- (13) 1st and 2nd Platoons receive scattered fire from their fronts.
- (14) Fighter-bomber and helicopter gunship strikes made along battalion's front.
- (15) Underage soldier is discovered and evacuated.
- (16) Brigade makes air-drop of surrender leaflets.
- (17) 3rd Platoon kills three guerrillas attempting to infiltrate position.
- (18) 2nd Platoon fires on guerrillas to front.
- (19) 1st, 2nd, and 3rd Platoons come under heavy attack.
- (20) Attacks against 1st, 2nd, and 3rd Platoons increase in intensity.
- (21) Attack against remainder of battalion increases in intensity.
- (22) 1st Platoon repulses assault.
- (23) A sapper team destroys a 3rd Platoon machinegun.
- (24) Battalion discovers and informs company commander of guerrilla plan of attack.
- (25) 3rd Squad of 3rd Platoon is overrun.
- (26) 1st and 2nd Platoons report lessening pressure.
- (27) Battalion informs company commander of plan for relieving ALFA Company.
- (28) 3rd Platoon is overrun.
- (29) Pressure against 1st and 2nd Platoons lessens.
- (30) Relief force arrives.

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process and the materials that resulted. It was concluded that organizational simulations contribute an aspect to assessment center programs that is not obtainable through other techniques.

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